ORIGINAL

GOAA DATE 10/19/22

ITEM NO. 7-E

DOCUMENTARY # 101517

PROJECT MANUAL

INCLUDING CONSTRUCTION SPECIFICATIONS

for

BP-S00195
TERMINAL C, PHASE 1X – AIRSIDE CONCOURSE

CONTRACT DOCUMENTS

Volume 1 OF 7
(Divisions 00 – 01)

ORLANDO INTERNATIONAL AIRPORT

Orlando, Florida 32827

GREATER ORLANDO AVIATION AUTHORITY

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GREATER ORLANDO AVIATION AUTHORITY
ADVERTISEMENT FOR BIDS

The Greater Orlando Aviation Authority, hereinafter called "Owner," hereby requests sealed bids for **"BP-S00195, TERM C, PH 1 - AIRSIDE CONCOURSE (Project), at ORLANDO INTERNATIONAL AIRPORT."**

Scope of work includes, but is not limited to demolition, masonry, waterproofing and caulking, roofing, fireproofing, fire stopping, skylights, interior glass and glazing, curtain wall, doors, frames and hardware, drywall, framing, finishes, fire protection, mechanical, and plumbing to expand the Ground Transportation Facility Boulevard with conditioned connection between the Landside Terminal and the South APM Complex at the Orlando International Airport. This scope also includes a loop road to be constructed underneath the GTF to tie in a future rental car jockey road to the parking garage and includes stabilization, drainage, curbing, barrier walls, lighting and markings and everything required by design intent to complete the project.

Sealed bids will be received in the Project Controls Office, Greater Orlando Aviation Authority, 11312 Terminal C Service Road, Bldg. 16, Orlando, FL 32824, up to 2:00 p.m., local time, July 19, 2022, at which time all bids received will be publicly opened the contents noted and read aloud.

On and after June 20, 2022, Bid Documents will be electronically available and may be obtained by contacting Matthew Granlund, RA, Senior Project Architect, HNTB Corporation, Phone: (407) 825-1594; Email: mgranlund@hntb.com. A complete examination and understanding of the drawings and specifications contained in the Bid Documents is necessary in order for the Bidder to properly submit a Bid. The Bid Documents also include a detailed set of Instructions to Bidders. All Bids shall be prepared in accordance with the Instructions to Bidders. The failure to comply with any requirement contained in the Bid Documents may result in the rejection of the Bid as non-responsive or a finding that the Bidder is not qualified for this Project.

The time of completion for this Work is anticipated to be 1095 calendar days to achieve Substantial Completion; exact time requirements are defined in the Instructions to Bidders.

A Pre-Bid Conference will be conducted at the Orlando International Airport, Orlando International Airport, Conference Room ALPHA - 11344 Terminal C Service Road, Orlando, FL 32824, on June 30, 2022 at 2:00 PM, local time. A Site Inspection may be conducted immediately following the Pre-Bid Conference or at a time specified during the Pre-Bid Conference. The Pre-Bid Conference is the primary opportunity that Bidders will have to address with the Owner questions about the Project, the Contract Documents, and the Owner's security requirements.

A Bid Security in the amount of ten percent (10%) of the sum of the Total Bid Price will be required for this Project. Exact Bid Guarantee period requirements are defined in the Instructions to Bidders.

The Authority, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

IMPORTANT NOTICES

All Bidders are hereby notified that they must comply with: 1) the Disadvantaged Business Enterprise (DBE) requirements of 49 CFR Part 26, as referenced in the Owner's Disadvantaged Business Enterprise Participation Program and Affirmative Action requirements; 2) the Buy American requirements imposed by 49 USC § 50101; 3) the minimum prevailing wage rates established by the Secretary of the U.S. Department of Labor (Davis Bacon requirements); 4) Certification Regarding Lobbying Pursuant to 49 CFR Part 20 for Contracts, Grants, Loans, and Cooperative Agreements; 5) Certification Regarding Debarment, Suspension, Ineligibility And Voluntary Exclusion (2 CFR Part 1200,2 CFR Part 180, and the Owner's Policy Section 130.04); 6) Certification Regarding Foreign Trade Restriction; 7) the Standard Title VI Assurances and Nondiscrimination Provisions; 8) the Foreign Trade Restriction Certification (49 USC §50104 and 49 CFR part 30); and, 9) the procurement of recovered materials pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247.

The Owner, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The requirements of 49 CFR part 26 apply to this Contract. It is the policy of the Owner to practice nondiscrimination based on race, color, sex or national origin in the award or performance of this Contract. The Owner encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY

1. The Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area are as follows:

Timetables:

Goals for minority participation for each trade:	15.5%
Goals for female participation in each trade:	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from

contractor-to-contractor or from project-to-project, for the sole purpose of meeting the Contractor's goals, shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director, Office of Federal Contract Compliance Program (OFCCP), within ten (10) working days of award of any construction subcontract in excess of Ten Thousand Dollars ($10,000.00) at any tier of construction work under the Contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the Subcontractor; employer identification number of the Subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this notice and in the Contract resulting from this solicitation, the "covered area" is Orlando, Florida SMSA*.

*Orange, Osceola, and Seminole Counties, Florida.

The Owner's award of this Contract is conditioned upon the Bidder satisfying the good faith effort requirements of 49 CFR §26.53. The DBE requirements are set forth in General Provisions Section 20-28 of this Solicitation.

The DBE Participation Goal for this Contract is 20%.

M. Carson Good, Chairman
Greater Orlando Aviation Authority

PART I – GENERAL PROVISIONS

SECTION 10 DEFINITION OF TERMS

Whenever the following terms are used in these specifications, in the Contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be interpreted as follows:

10-01 AASHTO. The American Association of State Highway and Transportation Officials (AASHTO), the successor association to AASHO.

10-02 ACCESS ROAD. The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.

10-03 ADVERTISEMENT. A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.

10-04 AIRPORT Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; airport buildings and facilities located in any of these areas, and a heliport.

10-05 AIRPORT IMPROVEMENT PROGRAM (AIP). A grant-in-aid program, administered by the Federal Aviation Administration (FAA).

10-06 AIR OPERATIONS AREA (AOA). The term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.

10-07 APRON. Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.

10-08 ASTM. Formerly known as the American Society for Testing and Materials (ASTM).

10-09 AWARD. The Owner's notice to the successful Bidder of the acceptance of the submitted Bid.

10-10 BID. *The written offer of the Bidder (when submitted on the approved Bid form) to perform the contemplated Work and furnish the necessary materials in accordance with the provisions of the plans and specifications. The bid consists of the Bid Form, Bid Security, Exhibits, schedules and other documents required to be submitted by a Bidder in accordance with the Instructions to Bidders.*

10-11 BID DOCUMENTS. *The Bid Documents consist of the documents provided to the bidders upon which the Bid is to be based, including the Advertisement, Bid forms, Project Manual, Drawings, Specifications, written Instructions to Bidders, Invitation to Bid, Addenda, and the documents, reports and information referenced in such Bid Documents.*

10-12 BID SECURITY. *The bid security furnished with a Bid to guarantee that the Bidder will submit a responsive Bid, will not withdraw its Bid for a period time designated in GP-20 after the time and date fixed for the opening of Bids, and that if the Bidder is provided with a Notice of Intent to Award the Contract, it will enter into the Contract, will supply evidence of the authority of the person executing the Contract and the Bonds to do so; and will submit the required Payment and Performance Bonds and Certificates of Insurance, and all other required documents required by the Contract.*

10-~~10~~13 BIDDER. Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a *Bid* ~~proposal~~ for the work contemplated.

10-~~11~~14 BUILDING AREA. An area on the Airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.

10-~~12~~15 CALENDAR DAY. Every day shown on the calendar.

10-~~13~~16 CERTIFICATE OF ANALYSIS (COA) The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.

10-~~14~~17 CERTIFICATE OF COMPLIANCE (COC) The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the Contract. The certificate shall be signed by the manufacturer's authorized representative.

10-18 CLAIM. *A Claim is a demand or assertion by the Owner or Contractor seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. A Claim also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Claims must be made by written notice and quantified pursuant to Section 50. Daily reports, job coordination meeting minutes and Requests for Change Orders do not constitute written notice of a Claim.*

10-19 CONFORMED CONTRACT DOCUMENTS: *For ease of administration of the Contract, the Owner may elect to have the Designer conform the Contract Documents. Conformed Contract Documents consist of the Bid Documents which are revised to incorporate information contained within the Addenda. If the Contract Documents have been conformed, the Contractor is responsible for verifying that the Addenda are accurately incorporated into the Conformed Contract Documents before relying on them for purposes of construction. Conformed Contract Documents are for convenience and do not supersede the information contained within the Contract Documents.*

10-~~15~~20 CONTRACT. ~~A written agreement between the Owner and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment. The awarded contract includes but may not be limited to: Advertisement, Contract form, Proposal, Performance bond, payment bond, General provisions, certifications and representations, Technical Specifications, Plans, Supplemental Provisions, standards incorporated by reference and issued addenda.~~ *The phrase Contract may be used as an abbreviation for Contract Documents, which together form the Contract for Construction.*

10-21 CONTRACT DOCUMENTS: *The Contract Documents consist of the executed Contract between the Owner and Contractor, the Bid Documents, the Bid, and Contract Modifications issued after execution of the Contract.*

10-~~16~~22 CONTRACT ITEM (PAY ITEM). A specific unit of work for which a price is provided in the contract.

10-~~17~~23 ~~CHANGE ORDER~~ *CONTRACT MODIFICATION.* ~~A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for work within the scope of the contract and necessary to complete the project.~~ *A Contract Modification is (1) a Change Order, (2) a Construction Change Directive, or (3) a Field Change Order.*

10-~~18~~24 CONTRACT TIME. The number of calendar days ~~or working days~~, stated in the ~~proposal~~ *Bid Documents*, allowed for completion of the Contract *for Substantial Completion of the Work*, including authorized time extensions. If a calendar date of completion is stated in the ~~proposal~~ *Bid Documents*, in lieu of a number of calendar ~~or working~~ days, the *Work, or specific component of the Work as defined in the Contract Documents,* shall be completed by that date.

10-~~19~~25 CONTRACTOR. The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.

10-~~20~~26 CONTRACTORS QUALITY CONTROL (QC) FACILITIES. The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP).

10-~~21~~27 CONTRACTOR QUALITY CONTROL PROGRAM (CQCP). Details the methods and procedures that will be taken to assure that all materials and completed construction required by the Contract conform to Contract plans, technical specifications, *the Contract,* and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors.

10-~~22~~28 CONTROL STRIP. A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.

10-~~23~~29 CONSTRUCTION ~~PHASING~~ *SAFETY* AND PHASING PLAN (CQSPP). The overall plan for safety and phasing of a construction project developed by the airport operator *or Owner*, or developed by the airport operator's consultant and approved by the airport operator *or Owner*. It is included in the Invitation ~~for~~ *to* Bid and becomes part of the ~~p~~*P*roject ~~s~~*Specifications*.

10-~~25~~30 *DESIGNER* ~~ENGINEER~~. ~~The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering, inspection, and/or observation of the contract work and acting directly or through an authorized representative.~~ *The Designer is the person or entity lawfully licensed in Florida to provide architectural or engineering services identified as such in the Contract Documents and is referred to throughout the Contract Documents as if singular in number. The term "Designer" means the Designer or the Designer's authorized representative.*

10-~~24~~31 DRAINAGE SYSTEM. The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

10-~~26~~32 EQUIPMENT. All machinery, together with the necessary supplies for upkeep and maintenance; and all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-~~27~~33 EXTRA WORK. An item of work not provided for in the awarded C~~c~~ontract as previously modified by Change Order or *Contract Modification* ~~supplemental agreement~~, but which is found by the ~~Owner's Engineer or Resident Project Representative (RPR)~~ *OAR* to be necessary to complete the Work within the intended scope of the Contract as previously modified.

10-~~28~~34 FAA. The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.

10-~~29~~35 FEDERAL SPECIFICATIONS. The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.

10-36 FINAL COMPLETION. *Final Completion is the date when final acceptance of the Work in accordance with the Contract Documents is achieved and all other Contract requirements have been fully performed, including the delivery of all required close-out documentation.*

10-~~30~~37 FORCE ACCOUNT. (a) Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis. (b) Owner Force Account - Work performed for the project by the Owner's employees.

10-38 GENERAL PROVISIONS. *Whenever, in the Specifications or on the Plans, the words "General Condition", "Special Conditions", "Special Provisions", it shall be understood that the intent and meaning shall be interpreted to be the same and refer to the General Provisions GP-10 to GP-120.*

10-~~31~~39 INTENTION OF TERMS. Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the ~~Engineer~~ *Owner* and/or ~~Resident Project Representative (RPR)~~ *OAR* is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Designer ~~Engineer~~ *Owner* and/or ~~RPR~~ *OAR*, subject in each case to the final determination of the Owner.

Any reference to a specific requirement of a numbered paragraph of the ~~C~~contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.

The intent of the Contract is to include all information necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one portion shall be as binding as if required by all. Performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable as being necessary to produce the intended results. The Drawings indicate arrangements and results to be accomplished and the Contractor shall provide such necessary fastenings and accessories. If a conflict exists between the Contract Documents, the Order of Precedence provision contained in Section 50 shall apply.

Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings or Plans shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

10-~~32~~40 LIGHTING. A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.

10-41 LIQUIDATED DAMAGES*: Liquidated Damages are those damages identified in the GP-20 that the Owner may assess against the Contractor or its Surety for tardy Substantial or Final Completion of the Work and for the Contractor's failure to achieve any other milestone date identified in the Contract Documents .*

10-42 LUMP SUM CONTRACT*. Based on single Bid amount including all allowances to complete the entire Work of the Project.*

10-~~33~~43 MAJOR AND MINOR CONTRACT ITEMS. A major contract item shall be any item that is listed in the ~~proposal~~*Bid*, the total cost of which is equal to or greater than 20% of the total amount of the award *eContract*. All other items shall be considered minor contract items.

10-~~34~~44 MATERIALS. Any substance specified for use in the construction of the Ceontract *W*~~w~~ork.

10-~~36~~45 NOTICE TO PROCEED (NTP). A written notice to the Contractor to begin the actual Ceontract *W*work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.

10-~~37~~46 OWNER. The term "Owner" shall mean the party of the first part or the contracting agency signatory to the Ceontract. Where the term "Owner" is capitalized in this document, it shall mean airport Sponsor only. The Owner for this project is *the Greater Orlando Aviation Authority*.

10-47 OWNER'S AUTHORIZED REPRESENTATIVE (OAR). *The OAR is the individual, partnership, firm, or corporation duly authorized by the Owner to perform the OAR's responsibilities of the Contract Documents and will perform necessary inspections, observations, tests, and/or observations of tests of the Contract Work performed or being performed, or of the materials furnished or being furnished by the Contractor.*

10-~~38~~48 PASSENGER FACILITY CHARGE (PFC) Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.

10-~~39~~49 PAVEMENT STRUCTURE. The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.

10-~~40~~50 PAYMENT BOND. The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will pay in full all bills and accounts for materials ~~and~~, labor *or supplies* used *directly or indirectly* in the construction of the Work.

10-~~41~~51 PERFORMANCE BOND. The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will complete the work in accordance with the terms of the Ceontract, *including all applicable warranties.*

10-~~42~~52 PLANS. The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the Ceontract, supplementary to the specifications. Plans may also be referred to as 'Ceontract D~~d~~rawings' *and include all graphic and pictorial portions of the Contract Documents, wherever located, showing the Work, generally including elevations, sections, details, schedules and diagrams.*

10-~~43~~53 PROJECT. The agreed scope of work for accomplishing specific airport development with respect to a particular airport *and is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.*

~~**10-44 PROPOSAL** ***See Bid*** The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.~~

~~**10-45 PROPOSAL GUARANTY** – ***See BID SECURITY*** The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Owner.~~

10-54 PROJECT MANUAL: *The Project Manual consists of one or more volumes of bound documents assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.*

10-~~46~~*55* QUALITY ASSURANCE (QA). Owner's responsibility to assure that construction Work completed complies with specifications for payment.

10-~~47~~*56* QUALITY CONTROL (QC). Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications *and the Contract.*

10-~~48~~*57* QUALITY ASSURANCE INSPECTOR (QA). An authorized representative of the *Designer* ~~Engineer~~ and/or ~~Resident Project~~ *Owner's Authorized Representative (OAR) RPR)* assigned to make all necessary inspections, observations, tests, and/or observation of tests of the Work performed or being performed, or of the materials furnished or being furnished by the Contractor.

10-~~49~~*58* QUALITY ASSURANCE LABORATORY (QA). The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the *Designer* ~~Engineer~~ or ~~RPR~~ *OAR.* May also be referred to as *Designer's*~~Engineer's~~, Owner's, or QA Laboratory.

***10-59 RECORD DOCUMENTS**: The Record Documents consist of those documents assembled by the Designer at the conclusion of the Contractor's performance of construction or service. Record Documents are developed from as-built drawings, as-built specifications and any other documents required to be submitted by the Contractor for closing out the Project. The Record Documents shall accurately document the Work as constructed, including all Contract Modifications and Changes.*

10-~~50~~*60* *RESIDENT PROJECT REPRESENTATIVE (RPR). See OAR.* ~~The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative.~~

10-~~51~~*61* RUNWAY. The area on the airport prepared for the landing and takeoff of aircraft.

10-~~52~~*62* RUNWAY SAFETY AREA (RSA). A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA.

10-~~53~~*63* SAFETY PLAN COMPLIANCE DOCUMENT (SPCD). Details how the Contractor will comply with the CSPP.

10-~~54~~*64* SPECIFICATIONS. A part of the Contract containing the written directions and requirements for completing the Contract Work, *including requirements for materials, equipment, construction systems, standards and workmanship, and performance of related services.* Standards for specifying materials or testing which are cited in the Contract specifications by reference shall have the same force and effect as if included in the Contract physically.

10-~~55~~*65* SPONSOR. **A** Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport. See definition above of "Owner."

10-~~56~~*66* STRUCTURES. Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.

10-~~57~~*67* SUBGRADE. The soil that forms the pavement foundation.

10-68 SUBSTANTIAL COMPLETION. *Substantial Completion is the date when the Work, or designated portion thereof, is deemed by the OAR and Designer to be sufficiently complete in accordance with the requirements of the Contract Documents, agreed to by the Owner, and includes but is not limited to compliance with the requirements of Section 50 and Section 01 78 00, having been fulfilled.*

10-~~58~~69 SUPERINTENDENT. The Contractor's executive representative who is present on the Work during progress, authorized to receive and fulfill instructions from the ~~RPR~~ *Owner and/or OAR*, and who shall supervise and direct the construction.

10-~~59~~70 ~~SUPPLEMENTAL AGREEMENT.~~ ~~A written agreement~~ *Contract Modification* ~~between the Contractor and the Owner that establishes the basis of payment and Contract Ttime adjustment, if any, for: the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope Work would that increases or decreases the total amount of the awarded Contract by more than 25%; (2) in scope Work would that increases or decreases the total of any major Contract item by more than 25%; (3) work that is not within the scope of the originally awarded Contractor (4) adding or deleting of a major Contract item.~~ **See CONTRACT MODIFICATION**

10-~~60~~71 SURETY. The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.

10-~~61~~72 TAXILANE. A *T*~~t~~axiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.

10-~~62~~73 TAXIWAY. The portion of the air operations area (AOA) of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.

10-74 UNIT PRICE CONTRACT. *Based on specific units of Work for which unit prices are provided in the Bid Form and totaled to provide the Bid amount. Unless otherwise specified in the Contract Documents, payment on a Unit Price Contract will be made on the basis of actual quantities of Work performed at the Unit Price defined in the Contract.*

10-~~63~~75 WORK. The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the Contract, plans, and specifications, *whether completed or partially completed and includes all services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or part of the Project and may refer to all or a portion of the labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the Contract Documents, plans, and specifications. The terms "Work" and "work" may be interchangeable and shall have the same meaning throughout the Contract Documents.*

10-~~64~~76 WORKING DAY. A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work as set forth in GP Section 80. ~~for at least six (6) hours toward completion of the contract.~~ When Work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.

END OF SECTION 10

SECTION 20 BID REQUIREMENTS AND CONDITIONS – *INSTRUCTIONS TO BIDDERS*

20-01 ADVERTISEMENT (Notice to Bidders).
Refer to Section 00 11 13 – ADVERTISEMENT FOR BIDS of the Project Manual for the advertisement relating to this Project.

20-02 QUALIFICATION OF BIDDERS.
Each bidder shall submit evidence of competency and evidence of financial responsibility to perform the work to the Owner at the time of bid opening.

Evidence of competency, unless otherwise specified *in the advertisement or the Bid Documents*, shall consist of statements covering the bidder's past experience on similar work, and a list of equipment and a list of key personnel that would be available for the work.

The Bidder is required to have successfully completed, within the last five years, similar work as specified in the Bidder's Qualifications Specifications Section 00 45 13 (if required by the Bid Documents). If the Bidder intends to subcontract any portion of the project components that are specified in the Bidder's Qualifications Specifications Section 00 45 13, the Bidder shall designate the subcontractor's prior experience in Section 00 45 13. Failure to complete Section 00 45 13, or the failure to demonstrate the required minimum experience, may cause the Bidder to be considered not qualified or the Bid to be considered non-responsive and the Bid rejected.

The Owner reserves the right to request any additional supporting documents deemed necessary after the Bid opening regarding the Bidder's previous work experience, and the Bidder shall provide such information within 48 hours of such request.

In addition, if required by the Bid Documents, each bidder shall furnish the Owner satisfactory evidence of their financial responsibility. Evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether their financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

Unless otherwise specified, a bidder may submit evidence that it is pre-qualified with the ~~State Highway Division~~ *Florida Department of Transportation (FDOT)* and ~~are~~ *is* on the current "bidder's list" of the state in which the *for the* proposed Work ~~is located~~. Evidence of ~~State Highway Division~~ *Florida Department of Transportation (FDOT)* prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

20-03 TIME OF COMPLETION
The time of completion is of the essence of the Contract and each Bidder, if delivered an executed Contract, shall proceed with the Work in accordance with the approved schedule and within the Contract Time period specified in the Contract. In the event of failure to complete the Work within the time specified, the Owner may assess damages as provided by law or the Contract, unless an appropriate extension of time has been

granted in writing. This time period is inclusive of a () calendar day submittal period during which no work will be performed at the job site unless authorized by the Owner or OAR.

The time of completion for this Work, as used throughout the Contract, is 1095 calendar days to achieve Substantial Completion, commencing from the issuance of the Notice to Proceed.

Final Completion shall be achieved within 120 calendar days from the date of Actual Substantial Completion.

20-04 LIQUIDATED DAMAGES

The Owner and Contractor acknowledge and agree that time is of the essence in the completion of the Work. The Owner and the Contractor acknowledge and agree that the amount of damages for delay in the performance and completion of the Work is impossible to determine as of the date of execution of the Contract and will be difficult, if not impossible to quantify with any reasonable certainty. Therefore, Owner and Contractor acknowledge and agree *that if a milestone date identified in the Contract Documents, including Substantial Completion or Final Completion and milestone dates identified in the Contract Documents are not achieved within the established time frame, as adjusted by Contract Modifications, if any, the Contractor and the Contractor's surety shall be liable to the Owner for Liquidated Damages for such delay, not as a penalty* but as compensation to the Owner for its damages incurred due to *such delay, as follows: TEN THOUSAND and 00/100 Dollars ($10,000.00) per calendar day for each and every consecutive calendar day elapsing between the date fixed for Substantial Completion of the Work and the date Substantial Completion is actually achieved and if specified in the Contract Documents, every consecutive calendar day elapsing between the date fixed for a defined milestone and the date that the milestone is actually achieved; and ZERO and 00/100 Dollars ($0.00) per calendar day for each and every consecutive calendar day beyond the calendar days fixed for Final Completion of the Work and the date Final Completion is actually achieved.*

In the event the Contractor fails to perform any other covenant or condition of this Contract relating to the Work, the Contractor shall become liable to the Owner for any actual damages which the Owner may sustain as a result of such failure on the part of the Contractor. The Owner's receipt of payment for such Liquidated Damages does not preclude the Owner from pursuing any other rights or remedies available to it under the Contract or Florida law.

20-05 COMPUTATION OF TIME

Unless otherwise specified in the Bid Documents, the term "days" shall refer to calendar days. When any obligation or deadline is measured by the number of days and the deadline date falls on a legal holiday or weekend when the Owner's office is closed, the obligation will be allowed to be completed on the next business day without penalty.

***20-0306 CONTENTS OF ~~PROPOSAL FORMS~~* BID DOCUMENTS**

The Owner's ~~proposal forms~~ *Bid Documents* state the location and description of the proposed construction; the place, date, and time of opening of the ~~proposals~~ *Bids*; and, *for a Unit Price Contract,* the estimated quantities of the various items of ~~w~~*Work* to be performed and *materials* to be furnished for which unit bid prices are asked. The ~~proposal form~~ *Bid Documents* state~~s~~ the time in which the Work must be completed, and the amount of the ~~proposal guaranty~~ *Bid Security* that must accompany the *Bid.* ~~proposal.~~ The Owner will accept only those ~~Proposals~~ *Bids* properly executed on physical forms ~~or electronic forms~~ provided by the Owner. Bidder actions that may cause the Owner to deem *a* ~~proposal~~ *Bid* irregular are given in paragraph 20-12 IRREGULAR ~~proposals~~ *BIDS*.

Bids shall be submitted on a copy of the attached Bid Documents. All blank spaces in the Bid Form shall be completed legibly and correctly in ink. The Bidder shall specify the Total Bid Price for the entire Work

described in the Contract Documents. ***No modifications to the Bid Documents shall be permitted, unless made pursuant to an Addendum.***

The Project Plans or Drawings, Specifications, and other documents designated in the Bid Documents shall be considered a part of the Bid whether attached or not. The Drawings and other Contract Documents set forth, among other factors, the location and description of the Work to be performed under this Contract, the quantity of Work for which Bids are invited, the time in which the Work must be completed, and the amount of the Bid Security.

20-~~04~~07 ISSUANCE OF ~~PROPOSAL~~ BID FORMS

The Owner reserves the right to refuse to issue a ~~proposal~~ *Bid* form to a prospective bidder if the bidder is in default for any of the following reasons:

a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the ~~proposal~~ *Bid* as a requirement for bidding.

b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the ~~proposal~~ *Advertisement* to a prospective bidder.

c. Documented record of Contractor default under previous contracts with the Owner.

d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-~~05~~*08* INTERPRETATION OF ESTIMATED ~~PROPOSAL~~ *BID* QUANTITIES *FOR UNIT PRICE CONTRACTS.*

For Unit Price Contracts, an estimate of quantities of work to be done and materials to be furnished under these specifications is given in the ~~proposal~~ B*id Documents*. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of ~~proposals~~ *bids* and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished *at the unit prices defined in the Bid* in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as provided in the Section 40, paragraph 40-03 ALTERATION OF WORK AND QUANTITIES, without in any way invalidating the unit ~~bid~~ prices *defined in the Bid*.

20-~~06~~*09* EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE.

The Bidder is ~~expected~~ *required* to carefully examine the site of the proposed Work, the ~~proposal~~ *Bid Documents*, Plans, Specifications, and Contract *Documents* ~~forms~~. Bidders shall satisfy themselves to the character, quality, and quantities of Work to be performed, materials to be furnished, and to the requirements of the proposed Contract. The submission of a ~~proposal~~ *Bid* shall be prima facie evidence that the Bidder has made such examination and is satisfied as to the conditions to be encountered in performing the Work and as to the requirements of the proposed Contract, Plans, and Specifications. *A site visit will be conducted either following the Pre-Bid Conference or at a time specified during the period allowed for bidding.*

Boring logs and other records of subsurface investigations and tests ~~are~~ *may be* available for inspection of Bidders. It is understood and agreed that such subsurface information, whether included in the plans,

specifications, or otherwise made available to the Bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all Bidders. It is further understood and agreed that each Bidder is solely responsible for all assumptions, deductions, or conclusions which it may make or obtain from his/her examination of the boring logs and other records of subsurface investigations and tests that ~~are~~ *may be* furnished by the Owner.

The Owner disclaims all responsibility whatsoever with respect to the sufficiency or accuracy of test borings made, or of the logs of test borings, or of other investigations or records of subsurface conditions (including but not limited to, underground utility locations, or of the interpretations made thereof), and there is no warranty or guaranty, expressed or implied, that the conditions indicated by such test borings, logs, investigations, records, or information are representative of conditions existing throughout the Work site, or any part thereof, or that unforeseen developments may not occur.

20-~~07~~*10* PREPARATION OF ~~PROPOSAL~~ *BID*.
The Bidder shall submit his/her *Bid* on the forms furnished by the Owner. All blank spaces in the ~~proposal~~ *Bid* forms must be correctly filled in where indicated for each and every item for which a quantity is given. The Bidder shall state the price (written in ink or typed) both in words and numerals for which it proposes to do each pay item furnished in the ~~proposal~~ *Bid*. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

No modifications to the Bid Documents shall be permitted, unless made pursuant to an addendum. Bids must be submitted on an exact reproduction of the Bid forms provided.

The Bidder shall correctly sign the proposal in ink. If the ~~proposal~~ *Bid* is made by an individual, their name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state where the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a ~~proposal~~ *Bid* as an agent shall file evidence of their authority to do so and that the signature is binding upon the firm or corporation.

If the Bidder is a corporation that was incorporated outside of the State of Florida, the Bidder shall provide with its Bid a current Certificate of Good Standing issued by its state of incorporation, demonstrating that the corporation is in good standing. The Certificate must be dated within thirty days prior to the date of Bid opening.

If the Bidder is a joint venture, then the Bidder shall provide with the Bid, a copy of: 1) the Joint Venture Agreement; 2) Statements of Authority (as set out in the Florida Administrative Code, Rule 6164-15.002), giving the licensed Contractor full authority to conduct the contracting business of the joint venture; and, 3) documentation of approval from the Construction Industry Licensing Board of Items 1 and 2 above, if applicable.

20-~~08~~*11* RESPONSIVE AND RESPONSIBLE BIDDER.
A responsive *B*id conforms to all significant terms and conditions contained in the Owner's Invitation ~~for~~ *to* Bid. It is the Owner's responsibility to decide if the exceptions taken by a Bidder to the Bid Documents are material or not and the extent of deviation it is willing to accept.

20-~~09~~*12* IRREGULAR ~~PROPOSALS~~ *BIDS*.
~~Proposals~~ *Bids* ~~shall~~ *may* be considered irregular for, *including, but not limited to,* the following reasons:

a. If the ~~proposal~~ *Bid* is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the ~~proposal~~ *Bid* form is detached.

b. If there are unauthorized additions, *conditions, limitations, or exceptions to the Bid Documents or Contract Documents or any unauthorized* conditional or alternate pay items, or irregularities of any kind which make the ~~proposal~~ *Bid* incomplete, indefinite, or otherwise ambiguous.

c. If the ~~proposal~~ *Bid* does not contain a unit price for each pay item listed in the ~~proposal~~ *Bid*. ~~except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price~~.

d. If the ~~proposal~~ *Bid* contains unit prices that are obviously unbalanced.

e. If the ~~proposal~~ *Bid* is not accompanied by the ~~proposal~~ *Bid Security* specified by the Owner.

f. If the applicable Disadvantaged Business Enterprise information is incomplete.

The Owner reserves the right to reject ~~or downgrade~~ any irregular ~~proposal~~ *Bid* and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-~~10~~*13* BID ~~GUARANTEE~~ *SECURITY.*

Each ~~separate~~ ~~proposal~~ *Bid* shall be accompanied by a ~~bid bond~~ *Bid Security in the form of* a ~~certified~~ *cashier's* check *made payable to the Owner or a Bid Bond in the form contained in the Contract Documents, duly executed by the Bidder as Principal and* a *Surety thereon a surety company fulfilling the qualifications* and Power of Attorney requirements described in *GP 30*. Cash will not be accepted as a Bid *Security*.

The Bid Security shall be in an amount not less than ten percent (10%) of the amount of the Total Bid Price. The Bid Security shall guarantee that the Bidder will not withdraw the Bid for a period of 30 after the time and date fixed for the opening of Bids. If the Bidder improperly withdraws its Bid or if the Bidder receives a Notice of Intent to Award the Contract, and fails to execute and deliver to the Owner any of the Contract Documents within ten (10) days after the date of the Notice of Intent to Award, the Owner shall be entitled to the full amount of the Bid Security, not as a penalty, but in liquidation of and compensation for damages. A Notice of Intent to Award may then be provided to the next lowest, qualified, responsible Bidder whose Bid is responsive to the Invitation to Bid.

20-~~10~~*14* DELIVERY ~~OF~~ *AND RECEIPT OF BIDS* ~~PROPOSAL~~

Bids shall be hand delivered or mailed to the exact place specified in the Invitation to Bid. Bids must be submitted in sealed envelopes and labeled with the name of the Bidder, the Bidder's address, the time and date fixed for the opening of Bids and plainly marked as follows: "BID PACKAGE NO. BP-S00195, TERM C, PH 1 - AIRSIDE CONCOURSE, ORLANDO INTERNATIONAL AIRPORT." Bids received after that time will not be considered and will be returned unopened. Bids transmitted by facsimile or electronic mail are non-responsive and will not be considered.

20-~~11~~*15* WITHDRAWAL OR REVISION OF ~~PROPOSALS.~~ BIDS

A bidder may withdraw or revise (by withdrawal of one ~~proposal~~ *bid* and submission of another) a ~~proposal~~ *bid* provided that the bidder's request for withdrawal is received by the Owner in writing ~~or by telegram~~ before the time specified for opening bids. Revised ~~proposals~~ *bids* must be received at the place specified

in the advertisement before the time specified for opening all bids. *If the Bidder improperly withdraws its Bid, the Owner may seek recourse against the Bid Security as set forth in the Bid Security Section.*

20-~~12~~*16* PUBLIC OPENING OF ~~PROPOSALS~~. *BIDS*

~~Proposals~~ *Bids* shall be opened, and read, publicly at the time and place specified in the ~~advertisement~~ *Invitation to Bid*. Bidders, their authorized agents, and other interested persons are invited to attend. ~~Proposals~~ Bids that have been withdrawn (by written ~~or telegraphic~~ request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-~~13~~*17* DISQUALIFICATION OF BIDDERS.

A bidder shall be considered disqualified for any of the following reasons:

a. Submitting more than one ~~proposal~~ *Bid* from the same *individual,* partnership, firm, or corporation under the same or different name.
b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.
~~c. If the bidder is considered to be in "default" for any reason specified in the subsection titled ISSUANCE OF PROPOSAL PROPOSAL FORMS of this section.~~
c. *If the Bidder is committed by contract to work, which, in the Owner's judgment and sole discretion, might hinder or prevent the prompt completion of the Work under this Contract if awarded to the Bidder;*
d. *If the Bidder is behind on the approved completion schedule for any existing contracts with the Owner, in litigation with the Owner or having defaulted on a previous contract with the Owner;*
e. *If the Bidder has performed poor, negligent or defective work for Owner or any other party on prior projects, which, in the Owner's judgment and sole discretion, raises doubts as to the Bidder's ability to properly perform the Work;*
f. *Appearance of the Bidder on the Department of Management Services' Convicted Vendors List or Discriminatory Vendor List;*
g. *Not possessing the required licenses, registrations or certifications to perform the Work; or*
h *Any other reason required by applicable law or regulation.*

20-~~15~~*18 DISCREPANCIES AND OMISSIONS* ~~Discrepancies and Omissions.~~ A Bidder who discovers discrepancies or omissions with the project *B*id *D*ocuments shall immediately notify the *Owner* ~~Engineer~~ of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the *Owner* ~~Owner's Engineer~~ *a* written request for interpretation no later than *nine (9)* days prior to bid opening.

Any interpretation of the project Bid Documents by the ~~Owner's Engineer~~ *Designer* will be by written addendum issued by the Owner *or Designer*. The Owner will not consider any instructions, clarifications or interpretations of the Bid Documents in any manner other than written addendum.

20-19 OBLIGATION OF BIDDERS

The Bidder must inform itself fully of the construction, labor and security conditions under which the Work is to be performed. The Bidder shall not be relieved of its obligation to furnish all material, equipment, labor, and services necessary to carry out the provisions of the Contract Documents and to complete the contemplated Work for the consideration set forth in its Bid by reason of having failed to inform itself with respect to those matters.

20-20 ADDENDA – CHANGES WHILE BIDDING

Any questions or requests for interpretation of the drawings, specifications or other Contract Documents or correction of any apparent ambiguity, inconsistency or error therein, shall be in writing, addressed to HNTB CORPORATION, Attn. Matthew Granlund, RA,Senior Project Architect, 11346 Terminal C Service Road, Orlando, FL 32824, Phone: (407) 825-1594, Email: mgranlund@hntb.com, and must be received at least nine (9) calendar days prior to the date fixed for the receipt of Bids.

All interpretations, corrections and supplemental instructions will be in the form of written Addenda to the Contract Documents which, if issued, may be by Electronic mail (e-mail), registered mail, transmitted by facsimile, or hand delivered, to all prospective Bidders (at the respective addresses provided to HNTB CORPORATION at the time the Bidder received the Bid Documents) not later than five (5) calendar days prior to the date fixed for the receipt of Bids.

All Addenda shall become part of the Contract Documents. Only the interpretation or correction issued in a written Addendum shall be binding, and prospective Bidders are warned that no other source or form of communication is authorized to give information concerning, or to explain, interpret, or modify the Bid Documents.

If the Bidder fails to acknowledge receipt of any such Addendum in the space provided in the Bid Form, its Bid will nevertheless be construed as though the Addendum had been received and acknowledged, and the submission of its Bid will constitute acknowledgement of the receipt of the same.

20-21 REQUIRED LICENSES

Each Bid shall include a copy of all necessary licenses, registrations or certifications that are required to perform the Work. As a minimum qualification for building (vertical) construction, Bidder shall possess the necessary license(s) and be certified in accordance with Chapter 489, Florida Statutes.

When a General Contractor's license is required it shall be of the General Contracting type defined in Florida Statutes Section 489.105(3)(a).

20-22 POWER OF ATTORNEY AND COUNTERSIGNATURE

Attorneys-in-fact who sign Bid Bonds, Performance Bonds and Payment Bonds, must file with such Bonds a certified copy of their power-of-attorney to sign the bonds. All bonds must be countersigned by an agent appointed by the Surety and licensed by the State of Florida, with Power of Attorney attached.

20-23 INSURANCE REQUIREMENTS *The selected Bidder will be required to provide insurance Insideside the Aircraft Operations Area as listed below in accordance with the GP-70.*

Type of Insurance Policy	*Amount*
Commercial General Liability:	*$50,000,000 Each Occurrence, Per Project basis*
Maximum Deductible or Self-insured Retention:	*$1,000,000*

Coverage shall also include Products & Completed Operations and Contractual liability, and naming Owner as additional insured for the entire period of the statute of repose contained in Florida Statutes 95.11.

NOTE: Contractor shall agree to require Contractor or Subcontractor to maintain $10,000,000 each Occurrence directly related to any use of a crane during this Project.

Automobile Liability:	*$5,000,000 Combined Single Limit*
Maximum Deductible or Self-insured Retention:	*$1,000,000*
Naming Owner as Additional Insured	
Workers Compensation	*Statutory Limit*
And	
Employers' Liability	*$1,000,000 each accident*
	$1,000,000 disease-policy limit
	$1,000,000 disease-each employee
Pollution Liability Coverage:	*$10,000,000, each Claim*
Maximum Deductible or Self-insured Retention:	*$1,000,000*

Naming Owner as Additional Insured. If written on a claims-made basis, coverage shall apply for 3 years from completion of project/scope of work.

Any deductible or self-insurance retention must be indicated on the Certificate of Insurance. See the General Provisions Section 70-25 for Additional Insured requirements.

20-24 FLORIDA SALES, OTHER TAXES AND PERMITS

The Bidder is responsible for paying to the appropriate governmental entity all applicable taxes. Any applicable tax legally enacted when the bids are received shall be included in the Total Bid Price by the Bidder, whether or not yet effective or merely scheduled to go into effect.

The Owner reserves the right to remove from the scope of work the direct purchase of certain materials to be used or incorporated into the Project. Owner's direct purchase of materials, if any, will be determined after the contract has been awarded. If Owner decides to directly purchase materials, a deductive change order will be issued in an amount that accurately reflects the reduced scope of work, which will normally be the amount of the direct purchase invoice plus the amount of the saved sales tax. Bidders shall not reduce their Bid in anticipation of any Owner direct purchase.

The City of Orlando, Office of Permitting Services, collects a non-refundable 25% deposit for all commercial permit applications. The Owner will make the deposit once the amount is conveyed to the Owner by the City. The bidder is responsible for the balance of all permit fees as required by the Contract Documents..

20-25 NOTICE AND SERVICE THEREOF

All notices given by the Owner, OAR or the Designer, under the provisions of the Contract Documents, shall be in writing and delivery may be by either of the following methods:

a. *By delivery of the notice to the Bidder or to any officer of the Bidder if Bidder is a corporation, or to any agent of the Bidder.*
b. *By mailing the notice by United States mail to the address of the Bidder shown on the Bid.*

Notices given by the Owner, OAR or the Designer shall be effective upon mailing, if mailed

20-26 PUBLIC ENTITY CRIMES ACT AND OWNER'S DEBARMENT LIST

By signing the Bid Form, ~~I~~ the Bidder represents that it is not precluded from submitting a bid under Section 287.133(2)(a), which provides as follows: "A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal or reply on a contract to provide any goods or services to a public entity, may not submit a bid, proposal or reply on a

contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount set forth in Florida Statutes s.287.017, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list."

Further, any entity or individual placed on the Owner's Debarment List pursuant to the Owner Policy, Section 130.04, may not submit a response to any letter of intent, letter of interest, statement of qualifications, quote, proposal, or bid as a contractor, supplier, subcontractor, consultant or individual, of any tier, for any goods or services or contracts and may not provide any goods or services to the Owner, on behalf of the Owner, or on the Owner's property, regardless of whether there is a contractual relationship with the Owner. The Owner will disqualify any submission, bid or proposal that includes a person or entity on the Owner's Debarment List. You may request a copy of the Owner's Debarment List for your review at the following email:debarmentlist@goaa.org.

20-27 BID CHECKLIST

As a courtesy to all Bidders, the following checklist has been created to remind Bidders of certain requirements for submitting a Bid. To reduce the chance of your Bid being rejected, please confirm that you have properly completed or complied with the following:

a. *BID DELIVERY*

- *Envelope sealed, labeled and addressed as specified in General Provisions Section 20 – BID REQUIREMENTS AND CONDITIONS*
- *Delivered to exact specified location by bid deadline*

b. *00 41 13 - BID FORM*

- *Acknowledge addenda on page 2, if any*
- *Modifications made pursuant to Addenda only – No other modifications allowed*
- *Properly executed signature block (including address, SSN or Federal ID #)*
- *If Bidder is a foreign corporation, submit Certificate of Good Standing*
- *If Bidder is a joint venture, see specific requirements*
- *Confirm that there are no mathematical errors*

c. *00 43 13 - BID SECURITY (or Cashier's Check)*

- *In proper amount (10% of Total Bid Price)*
- *If Bid Bond:*
  - *On Proper Form*
  - *Blanks completed and dated*
  - *Executed by principal, surety, and witnesses*
  - *Countersignature executed*
  - *Power-of-Attorney attached to Bond for Surety and Florida agent*
  - *Surety properly rated and authorized to transact business in Florida*

d. *DBE Exhibits (All Exhibits are required. If a form is not applicable, indicate N/A on the form.)*

- *00 41 13.15 – Exhibit D – Schedule of DBE Subcontractor Participation of Total Bid Price – TO BE SIGNED BY THE BIDDER*
- *SUBMIT COPY OF GOOD-FAITH EFFORT, if required by the Owner's Policies.*

e. *Joint Venture agreement, if applicable*

f. *00 45 13- BIDDER'S QUALIFICATIONS – if required*

- *Qualifications experience (list all appropriate project experience)*
- *Qualifications supplement (provide all requested information)*

g. *SUBMIT COPY OF ALL REQUIRED LICENSES*

h. *00 45 49 - CERTIFICATE AS TO CORPORATE PRINCIPAL, if Bidder is a corporation*

******WARNING******

This checklist may <u>not</u> represent all of the information required to be submitted with each Bid. It is intended only to assist Bidders with compliance with the Instructions to Bidders and to help reduce the possibility of Bid irregularities.

FEDERAL BIDDING REQUIREMENTS:

20-28 DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION PROGRAM

Pursuant to regulations promulgated by the U.S. Department of Transportation, the Owner has adopted a "Disadvantaged Business Enterprise (DBE) Participation Program for Federally and State of Florida Funded Contracts."

The Owner's award of this contract is conditioned upon the Bidder satisfying the good faith effort requirements of 49 CFR §26.53.

The Policies, Forms and certified DBE Directory are available on-line at the Owner's web site: http://www.orlandoairports.net/small_business/index.htm

If a DBE participation contract goal has been established for this Solicitation, all Bidders shall complete and submit the schedule of DBE subcontractor *participation, Exhibit D to these Documents, with the Bid*, as a condition of bid responsiveness, and include the following information:
(1) The names and addresses of the DBE firms that will participate in the Contract;
(2) A description of the work that each DBE firm will perform;
(3) The dollar amount of the participation of each DBE firm listed under (1)
(4) Written statement from Bidder that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal; and
5) If Bidder cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder as described in appendix A to 49 CFR part 26.

The successful Bidder must provide written confirmation of participation from each of the DBE firms the Bidder lists in Exhibit D within 5 days of receiving the Owner's notice of award or with the Bid Documents as a condition of Bidder responsibility.

Questions concerning the DBE program can be addressed to the Owner's Office of Small Business Development, Attn. Mr. George Morning, Director, Greater Orlando Aviation Authority, Orlando International Airport, One Airport Blvd., Orlando, FL 32827; phone number (407) 825-7130, E-mail george.rnorning@goaa.org.

The Owner reserves the right to require compliance with its MWBE and/or LDB Programs in the event federal funding is not used for the Contract.

20-29 EQUAL OPPORTUNITY REPORT STATEMENT
Each Bidder shall complete the Equal Opportunity Report Statement that is included in the Bid Form.

20-30 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION (2 CFR PART 1200 AND 2 CFR PART 180)
By submitting a Bid under this Advertisement, the Bidder certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

20-31 CERTIFICATION REGARDING FOREIGN TRADE RESTRICTIONS (49 CFR PART 30)
TRADE RESTRICTION CERTIFICATION (49 CFR PART 30)
By submission of ~~an~~ Bid ~~offer~~, the Bidder ~~Offeror a~~ certifies that with respect to the ~~Solicitation~~ Advertisement and any resultant Contract, the Bidder ~~Offeror~~:

a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (U.S.T.R.);

b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the U.S.T.R; and

c. has not entered into any subcontract for any product to be used on the Federal on the project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

The ~~Offeror/~~Contractor must provide immediate written notice to the Owner if the ~~Offeror/~~Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a *Bidder* ~~an Offeror~~ or subcontractor:

(1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or

(2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such U.S.T.R. list or

(3) who incorporates in the public works project any product of a foreign country on such U.S.T.R. list;

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The ~~Offeror~~ *Contractor* agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in in all lower tier subcontracts. The Ceontractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by U.S.T.R, unless the *Contractor* ~~Offeror~~ has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

20-32 BUY AMERICAN CERTIFICATION

Each Bidder shall complete the Buy American Certification that is included with the Bid Form.

20-33 NON-SEGREGATED FACILITIES

The Bidder's signature on the Bid Form constitutes its Certification of Bidder Regarding Equal Employment Opportunity – Non-Segregated Facilities and that:.

(a) The Contractor agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Contractor agrees that a breach of this clause is a violation of the Equal Opportunity clause in this contract.

(b) "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.

(c) The Contractor shall include this clause in every subcontract and purchase order that is subject to the Equal Employment Opportunity clause of this Ceontract.

20-34 CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING (49 CFR 20)

The Bidder ~~or offeror~~ certifies by signing and submitting this Bid, ~~or proposal,~~ to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder ~~or Offeror~~, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

END OF SECTION 20

SECTION 30 AWARD AND EXECUTION OF CONTRACT

30-01 CONSIDERATION OF ~~PROPOSALS~~ *BIDS*.

After the ~~proposals~~ *Bids* are publicly opened and read, they will be compared on the basis of ~~the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices~~ *the Total Bid Price as included in Section 00 41 13. In determining the apparent low bid, the Owner reserves the right to correct, in all bids, obvious mathematical errors within the Total Bid Price, the unit price extensions, page totals or any combination thereof, if applicable.* If a bidder's ~~proposal~~ *Bid* contains a discrepancy between unit bid prices written in numbers, the unit price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's ~~proposal~~ bid for any of the following reasons:

a. If the ~~proposal~~ *Bid* is irregular as specified in Section 20,. paragraph 20-~~09~~*12* IRREGULAR ~~PROPOSALS~~ *BIDS*.
b. If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-~~14~~*17*, DISQUALIFICATION OF BIDDERS.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all ~~proposals~~ *bids*, waive *irregularities or* technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new ~~proposals~~ *bids*; or proceed with the Work otherwise. All such actions shall promote the Owner's best interests.

30-02 AWARD OF CONTRACT.

~~The~~ *A Notice of Intent to* Award ~~of a~~ *the* Contract, if it is to be awarded, shall be made within ~~60 calendar days of the date specified for publicly opening proposals,~~ *the Bid Guarantee Period specified in Section 20,* unless otherwise specified herein.

If the Owner elects to proceed with an award of contract, the Owner will make award to the responsible bidder whose Bid, conforming with all the material terms and conditions of the Bid Documents, is the lowest in price. .

Bidders are hereby informed that the award of this Contract may be contingent upon Owner's receipt of grant funding. The Owner reserves the right not to proceed with the award of the Contract for any reason, including, but not limited to, if the lowest Total Bid Price exceeds the Owner's estimates or budget or funding is otherwise unavailable. The Owner shall have the right to rescind its Notice of Intent to Award without liability, except for the return of the Bid Security to the Bidder, at any time before the Contract Documents have been fully executed by all parties and delivered to the Contractor.

The Owner also reserves the right to take into consideration the Bidder's Qualifications and past performance with the Owner or any other entity in determining if the Bidder is responsible and qualified.

30-03 CANCELLATION OF AWARD.

The Owner reserves the right to cancel the award without liability to the bidder, except return of ~~proposal~~ *Bid Security*, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with paragraph 30-07 APPROVAL OF CONTRACT.

30-04 RETURN OF ~~PROPOSAL~~ *BID* ~~GUARANTY~~ *SECURITY*.

All ~~proposal~~ *Bid* ~~guaranties~~ *Securities,* except those of the ~~two~~ *three* lowest bidders, will be returned ~~immediately~~ *within ten (10) days* after the Owner has made a comparison of Bids as specified in the paragraph 30-01, CONSIDERATION OF ~~PROPOSALS~~ *BIDS.* ~~Proposal~~ *Bid* ~~guaranties~~ *Securities* of the ~~two~~ *three* lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's ~~proposal~~ *Bid* ~~guaranty~~ *Security* will be returned *within seven (7) days.* The successful bidder's ~~proposal~~ *Bid* ~~guaranty~~ *Security* will be returned as soon as the Owner receives the Contracts bonds as specified in paragraph 30-05, REQUIREMENTS OF CONTRACT BONDS.

30-05 REQUIREMENTS OF CONTRACT BONDS.

At the time of the execution of the ~~C~~contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the ~~W~~work. ~~The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.~~

Contractors are hereby informed that as a public entity, the Owner's property is not subject to the Construction Lien Law contained in Chapter 713, Florida Statutes.

A Performance Bond and a Payment Bond satisfactory to the Owner, each in an initial amount of not less than the Total Contract Price, will be required from the successful Bidder for, among other, the following purposes: a) to guarantee faithful performance of the requirements of the Contract Documents, including all applicable warranties; b) to guarantee the payment of all labor, materials, or supplies used directly or indirectly in the prosecution of the Work provided for in the Contract; and c) to comply fully with the requirements of Florida law.

The Penal Sum of the Performance Bond and the Payment Bond shall be increased or decreased automatically during the course of the Work in the event that Contract Modifications or addenda increase or decrease the Total Contract Price so that the Penal Sum of each bond shall be in an amount equal to the Total Contract Price Sum at the completion of the Work.

The Bonds shall be written through a licensed Florida agency on behalf of a surety company licensed to do business in Florida meeting the following requirements:

a. *For Contracts in which the Total Contract Price exceeds $100,000, the Surety must be rated no less than "B+" as to management and no less than "VI" as to strength and for Contracts in which the Total Contract Price exceeds $1,000,000, the Surety must be rated no less than "A-" as to management and no less than "VIII" as to strength, by the latest edition of Best's Insurance Guide, published by A.M. Best Company, Post Office Box 1107, Summit, New Jersey 08901.*

b. *The Surety Company executing the bonds shall be on the current list of the U.S. Treasury Department as being approved by and for writing bonds for Federal projects in an amount not less than the Penal Sum of the bonds provided to Owner.*

c. *Bonding Limit – Any One Risk: The bonding limit of the Surety shall not exceed five percent (5%) of the policyholder surplus (capital and surplus) as listed by the aforementioned Best's Insurance Guide.*

d. *The Contractor shall, before commencing with the Work, record a copy of the Performance and Payment Bonds in the Orange County clerk's office pursuant to Florida Statute 255.05. Upon*

request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the applicable bond or shall permit a copy to be made.

If the Surety on any bond furnished by the Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated or suspended in any state or it ceases to meet the requirements defined above, or any such bond is otherwise void or defective for any reason, the Contractor shall within ten (10) days thereafter substitute Performance and Payment Bonds from a different Surety, pursuant to the Contract Documents. The Owner may at its sole discretion suspend all Work pursuant to GP80-12 pending Contractor procuring substitute bonds.

30-06 EXECUTION OF CONTRACT.

~~The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return such signed contract to the owner, along with the fully executed surety bond or bonds specified in paragraph 30-05, REQUIREMENTS OF CONTRACT BONDS, of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful bidder.~~ *Unless all Bids are rejected, a Notice of Intent to Award the Contract will be issued to the apparent successful Bidder. The Notice of Intent to Award is not a commitment, but a procedure to enable the Bidder to assemble and deliver to the Owner the Contract Documents. The Bidder who receives a Notice of Intent to Award the Contract shall, within ten (10) days of the date of Notice of Intent to Award, execute and deliver to the Owner all of the required Contract Documents, including, but not limited to the following:*

a. *the Contract Agreement in the form contained in the Bid Documents,*

b. *the Bond Cover Sheet, Performance Bond and Payment Bond in the form contained in the Bid Documents, each for not less than the Total Contract Price,*

c. *the Power of Attorney,*

d. *the Performance and Payment Bond Certification Form, evidencing the authority of the person executing the Bonds,*

e. *the Certificate of Insurance evidencing the required insurance coverage,*

f. *the required DBE data and submittals, and*

g. *the Preliminary Schedule.*

The above documents must be furnished, executed and delivered to the Owner before the Contract will be executed by the Owner. The Contract shall not be deemed awarded and shall not be binding upon the Owner until it has been executed by the Owner and a copy of the fully executed Contract Documents is delivered to the Contractor.

30-07 APPROVAL OF CONTRACT.

Upon receipt of the ~~c~~*Contract* and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the ~~c~~Contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed C~~c~~ontract to the Contractor shall constitute the Owner's approval to be bound by the successful ~~b~~*Bidder's* ~~proposal~~ *Bid* and the terms of the ~~c~~Contract.

30-08 FAILURE TO EXECUTE CONTRACT.

Failure of the successful bidder to execute the Contract and furnish an acceptable surety bond or bonds within ~~the period specified in paragraph 30-06, *EXECUTION OF CONTRACT*, of this section~~ *ten (10) calendar days after the date of the Notice of Intent to Award* shall be just cause for cancellation of the ~~a~~*Award* and forfeiture of the ~~proposal~~ *Bid Security*, not as a penalty, but as liquidation of damages to the Owner. *In such event, a Notice of Intent to Award the Contract may be provided to the next lowest, qualified Bidder whose Bid is responsive to the Advertisement.*

30-09 ALLOWANCES

The Contractor shall include in the Total Contract Price all allowances stated in the Contract. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct.

Unless otherwise provided in the Contract Documents:

a. *materials and equipment under an allowance shall be selected by the Owner within the time frames required by the current accepted schedule;;*

b. *allowances shall cover the cost to the Contractor of materials, supplies and equipment delivered at the site and all required taxes, plus mark-up in accordance with GP-40, less applicable trade discounts;*

c. *whenever allowances are used, the remaining allowance amount, and the Total Contract Price shall be adjusted accordingly by a Contract Modification. The amount of the Contract Modification shall be calculated in accordance with GP-40 and shall reflect the difference between actual costs and the allowance amount and be supported by appropriate substantiating data.*

30-10 OWNERSHIP AND USE OF DESIGNER'S DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

All Drawings, Specifications and other documents prepared by the Designer are and shall remain the property of the Owner, and the Owner shall retain all common law, statutory and other reserved rights with respect thereto. They shall not be used on any other project without the prior written consent of the Owner, and the Contractor shall take such action as may be necessary to prevent their use on any other project or for additions to the Project outside the scope of the Work by any Subcontractor or material and equipment Supplier. The Contractor, Subcontractors, and material and equipment Suppliers are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Designer appropriate to and for use in the execution of their Work under the Contract Documents. Submittals or distributions necessary to meet official regulatory requirements or for other purposes relating to completion of the Project are not to be construed as a publication in derogation of the Owner's copyright or other reserved rights.

30-11 STANDARD FORMS

The following forms shall be utilized in the execution of the Work:

1. *REQUEST FOR INFORMATION (RFI): A RFI shall be utilized in the field to present any questions or interpretations requested by the Contractor. The OAR shall, upon receipt, secure a response from an appropriate source. The OAR will provide the Contractor with a written response to the RFI with reasonable promptness to avoid or minimize delay in the progress of the Work.*

2. *REQUEST FOR CHANGE ORDER (RCO): A RCO shall be utilized by the Contractor to formally present any request for monetary, time, or contractual adjustment. The RCO shall provide justification for entitlement to the change and shall be substantiated in accordance with GP-40. A RCO is not notice of a Claim.*

3. *DESIGNER'S SUPPLEMENTAL INSTRUCTION (DSI): A DSI shall be utilized by the Designer to provide clarifications or supplemental information to the Contractor. The intent of the DSI is for the Designer to clarify and supplement the existing requirements of the Contract. A DSI may not modify the scope of Work.*

4. *BULLETIN: A Bulletin shall be utilized by the OAR to indicate proposed modifications to the drawings or specifications. Upon receipt of a Bulletin, the Contractor shall submit a detailed breakdown of costs (adds or deducts), if any, in the form of a Request for Change Order (RCO) for review by the Owner and OAR.*

5. *CHANGE ORDER (CO): A CO shall be utilized to formalize modifications to the Contract that are agreed to by the Owner and Contractor in accordance with GP-40.*

6. *CONSTRUCTION CHANGE DIRECTIVE (CCD): A CCD shall be utilized in the absence of an agreement on a CO to express a written order by the Owner directing a change in the Work in accordance with GP-40.*

7. *FIELD CHANGE ORDER (FCO): A FCO may be utilized for immediate direction and authorization to proceed with Changes in the Work in accordance with GP-40.*

8. *JOB MEMORANDUM (JM): A JM shall be utilized by the OAR to communicate in writing to the Contractor either a deficiency in the Work or other action required of the Contractor. The Contractor shall provide a written response to the OAR with reasonable promptness.*

30-12 INFORMATION AND SERVICES REQUIRED OF THE OWNER

The Owner shall furnish the Contractor with the name of the person or firm who shall be the OAR for the purpose of all communication required between the Owner and the Contractor.

The Owner shall not be responsible for furnishing surveys or other information as to the physical characteristics of or utility locations for the Project site.

The Owner shall secure and pay for any easements, transportation and sewer benefit fees, Orlando Utilities Commission charges for electrical transformer and primary service costs and water service inspection fees, and threshold inspections associated with the Work. The Contractor shall secure and pay for all other permits, inspections, fees and notices, as set forth more particularly in GP-70.

END OF SECTION 30

SECTION 40 SCOPE OF WORK

40-01 INTENT OF CONTRACT.

The intent of the *C*ontract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall ~~furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract~~ *provide and pay for all labor, services, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and all other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. The Contractor shall not be entitled, under any circumstances, to any increased cost of doing business, including but not limited to, increased costs of materials, trucking, and fuel, unless specifically addressed in the Specifications.*

40-02 AIRPORT LAYOUT PLAN CHANGE REQUEST

Prior to the start of construction, the Contractor shall be required to review the FAA permit for the construction equipment and machinery planned to be used at the Airport for the Project. If there is any modification required, an amendment shall be filed to the FAA by the Contractor through the OAR. The review and approval process requires a minimum of forty-five (45) days. No construction equipment or machinery shall be permitted on the Airport property until after the Airport Layout Change Request, including any modifications or amendments required for the Contractor's equipment, has been approved by the FAA. This construction equipment and machinery shall be marked and lighted in accordance with the FAA requirements or as shown and specified in the Contract Documents.

40-023 ALTERATION OF WORK AND QUANTITIES.

The Owner reserves the right to make such changes in quantities and *W*ork as may be necessary or desirable to complete, in a satisfactory manner, the original intended *W*ork. Unless otherwise specified in the Contract, the *Designer* shall *submit a Bulletin to the OAR defining the change in the Work Work and variation of quantities, and the Owner shall process a Contract Modification to implement such change* ~~be and is hereby authorized to make, in writing, such in-scope alterations~~ in the *W*ork and variation of quantities as may be necessary to complete the Work. ~~provided such action does not represent a significant change in the character of the Work.~~

For purpose of this section, a significant change in character of *W*ork means: any change that is outside the current contract scope of *W*ork; any change (increase or decrease) in the ~~t~~*Total C*ontract *Price*~~cost~~ by more than 25%; or any change in the total cost of a major *C*ontract item by more than 25%.

Work alterations and quantity variances that do not meet the definition of significant change in character of *W*ork shall not invalidate the C*c*ontract nor release the surety. Contractor agrees to accept payment for such *W*ork alterations and quantity variances in accordance with Section 90, paragraph 90-03, *Compensation for Altered Quantities.*

~~Should~~ ~~t~~*T*he value of altered *W*ork or quantity variance ~~meet the criteria for significant change in character~~ of such altered *W*ork ~~and quantity variance~~ shall be covered by a *Contract Modification* ~~supplemental agreement~~. ~~Supplemental agreements shall also require consent of the Contractor's surety and *shall be included under the Contract* separate performance and payment bonds.~~ If the Owner and the Contractor are unable to agree on a *Change Order* ~~unit adjustment~~ *that meets the criteria for significant change in character of Work* for any *C*ontract item ~~that requires a supplemental agreement~~, the Owner reserves the right to terminate the *C*ontract with respect to the item and make other arrangements for its completion.

40-04 PROCEDURES FOR CHANGES IN THE WORK

1. IN GENERAL

.1 Contract Modifications may be made by (1) Change Order ("CO"), (2) Construction Change Directive ("CCD") or (3) Field Change Order ("FCO"). Both COs and CCDs must be approved by the Owner's Construction Committee or the Greater Orlando Aviation Authority Board in accordance with the Owner's Policies. A FCO may be issued by the Owner in accordance with the Owner's Policies.

.2 When there is an agreement between the Owner and Contractor to modify the Work, Contract Price, Contract Time or other contract terms, a CO or FCO shall be signed by both the Contractor and the Owner.

.3 When the Contractor and Owner do not agree to the terms of a proposed CO, the Owner may unilaterally issue a CCD. Once signed by the Owner, CCDs are made part of the Contract and the Contractor has a contractual obligation to complete the Work identified in the CCD.

.4 Changes in the Work shall be performed in accordance with the applicable provisions of the Contract Documents.

.5 If the FCO, CO or CCD provides for an adjustment of the Total Contract Price, the amount of the adjustment shall be based upon one of the following methods which shall be selected by the Owner:

a. a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation which data shall include, at a minimum, copies of such books and records of the Contractor and its Subcontractors to verify actual material and equipment costs, labor costs, actual bond premiums, other allowable costs as defined in GP-40, and any estimates, work sheets, quotes, proposals or other data used by the Contractor in estimating the value of the changed Work; or
b. unit prices stated in the Contract Documents or subsequently agreed upon; or
c. in a manner otherwise agreed upon by the Owner and the Contractor; or
d. in accordance with the Force Account provisions of GP-40.

.6 If unit prices are included in the Contract Documents, the Owner may authorize by FCO, CO or CCD increases or decreases in quantities of any Work Item without any change in the applicable unit price, provided that the aggregate change does not increase or decrease the aggregate quantity of a Work Item by an amount greater than twenty-five percent (25%). If the aggregate quantity of a Work Item changes (either increases or decreases) by more than twenty-five percent (25%), then the Owner and Contractor shall mutually agree upon an increase, decrease, or no change in the unit price for the Work Item.

.7 Contractor shall submit a Request for Change Order (RCO) to the OAR for all proposed Contract Modifications. Each RCO must include a detailed breakdown of all proposed cost changes and the required schedule analysis and information for proposed changes in Contract Time. The proposed Contract Modifications in the RCO shall constitute a final proposed change, such that the Owner's acceptance of the RCO will provide complete relief, compensation, and time for the Contract Modification sought, without regard to whether the RCO contains estimates of relief such as, but not limited to, "rough order of magnitude" amounts, approximate schedules, or other documents or conditions. Moreover, when a Contract Modification references RCOs or any other documents submitted by the Contractor, including backup documentation, such documents and references are solely for the purposes of deciding the scope of the Work of the Contract Modification; no reservations, limitations, 'boilerplate,' or purported terms or conditions that may be contained in such documents or references are included in the Contract Modification. A RCO is not notice of a

Claim. RCOs seeking relief for circumstances giving rise to a Claim must comply with the requirements of GP 50.

.8 *Each RCO shall include the proposed equipment rates for major equipment owned or leased by the Contractor or by its Subcontractors and the proposed labor rates, excluding burden, for all major trades anticipated to be required on the Contract Modification, including those supplied by Subcontractors. This shall include written confirmation by the Contractor or Subcontractor where applicable, that the labor rates reflect actual compensation, excluding those items defined below to comprise labor burden. If the Contractor intends to request a labor burden rate greater than allowed by the Contract Documents, the complete substantiation for this request must also be submitted with the labor rates. The Contractor shall also provide, if requested by the OAR, actual payroll records to support the labor rates. After review and approval by the OAR, these approved labor and Contractor owned and leased equipment rates shall be used on subsequent change orders requiring work by these same trades and equipment. In the event that additional trades or equipment are required for Contract Modifications the Contractor shall provide the same information defined above for these additional trades and equipment to the OAR for approval.*

.9 *The RCO for a proposed change in contract cost must include a detailed breakdown of the allowable direct costs by Contractor, Subcontractors and Suppliers. The following allowable direct costs include direct labor, labor burden, equipment, material, sales taxes, additional bond costs and other costs further defined as follows:*

a. *Direct labor is all the labor required to perform the Work. Unless allowed in GP-40, direct labor does not include salaried employees on site, supervision (project manager, project engineer, superintendent) and home office costs, all of which are compensated as part of Contractor's mark-up. Each RCO shall include a complete breakdown for proposed direct labor by position with the proposed number of work hours for each position.*

b. *Contractor's burden on direct labor costs shall be limited to a maximum of 42% of labor costs for straight time and 30% for overtime, unless the Contractor justifies to the satisfaction of the Owner that the Contractor's actual costs for such items exceed these limits. Labor burden items are the net costs actually incurred by the Contractor for the following items: social security taxes (FICA); unemployment taxes (FUTA, SUTA); worker's compensation, medical and dental insurance premiums; pension, 401k and other types of retirement benefits and profit sharing plans; and paid time off, if applicable. For union labor, the burden rate shall be the actual amount defined by the union agreement in effect when the change order is negotiated. If the Contractor requests Owner's consideration of a burden rate exceeding these limits, the Contractor shall submit complete documentation of its higher costs to the OAR for approval.*

c. *Equipment costs shall comply with the following:*

(1) *If the equipment is owned or leased by the Contractor or Subcontractor (of any tier), the equipment rates shall not be more than fifty percent (50%) of the properly adjusted rates indicated in the most recent Rental Rate Blue Book by Dataquest Inc. ("Blue Book"), applicable to the date additional work activity was approved, for the period of actual use of such equipment. Maximum rates for equipment not listed in the Blue Book shall be established by capacity comparisons to other listed equipment. No overtime charges shall be made for equipment operating longer than 8 hours per day and only daily or prorated weekly or monthly rates per day shall be allowed depending on the*

actual rental period. The Contractor's equipment daily rates shall be based on 1/30th of the monthly rates, and hourly rates (not to exceed a total of 8 hours per day) shall be based on 1/176th of the monthly rate. Operating costs, if not included in the Blue Book rates, shall be no greater than 15% of the rental rate for actual operating hours:

(2) For rental equipment, the Contractor shall provide copies of the rental agreement for each item of equipment required for the work. Compensation will be made for the anticipated amount of time required for the work, rounded to the next lowest minimum rental duration (typically per day).

(3) .

(4) No payment will be made for repairs or repair down time.No payment will be made for the use of hand tools and other small equipment normally available at the Project site, which are compensated by Contractor's mark-up.

d. Material cost shall correspond to actual quantities of materials required to complete the Work. Invoices, prorated to these actual quantities, including freight to site, if not transported by trucks paid for otherwise, plus applicable sales tax, shall constitute the only reimbursable materials expenses. Material prices shall be consistent with or under values established by industry guides recording the lowest prices for Central Florida.

e. Actual increases in its performance and payment bond costs for the Project, but only to the extent supported by actual invoices which show the difference in cost resulting from the overall change in Total Contract Price. These additional costs are not included in change orders prior to the final change order for the Project. Contractor will be compensated for additional bonding costs such as Subguard or other similar bonding services, or for bonding costs for any Subcontractor or Supplier of any tier, but not both.

f. Actual increases in the cost of general liability insurance, but only to the extent supported by actual invoices which show the difference in cost resulting from any increase in insurance limits or other insurance-related requests by the Owner. *No payment will be made without this specific documentation.*

g. Actual increases in permitting costs, but only to the extent supported by actual invoices or receipts showing the difference between the permitting costs for the for the Work prior to any Contract Modifications and the final permitting cost after all Contract Modifications have been completed.

h. Transportation and living expenses for specialized personnel required to complete the Contract Modification that are based more than 50 miles from the Project site. Costs for transportation by private or rented vehicles shall not exceed the mileage costs established by the U.S. Internal Revenue Service. Public air and ground transportation costs must not exceed coach class fares documented by actual receipts. Living expenses (room and meals) shall not exceed the Per Diem rates established by the U.S General Services Administration for the location in which the Work is located.

i. In those cases where the Contract Documents allow for compensation related to the extension of Contract Time, the allowable costs are strictly limited to the following:

(1) Extended general conditions consisting of the cost for Contractor to maintain its site operations for the duration of the delay event,

(2) Demobilization and re-mobilization of equipment that is required for continuation of the Work after the delay event or reimbursement at the agreed equipment rates as defined above, whichever results in the lowest cost,

(3) Additional direct costs, if any, as defined above,

(4) Additional site supervision (project manager, project engineer, superintendent), direct labor costs, but only for supervision of any additional work during the period of extended contract time. If no additional work is performed, compensation for site supervision will not be allowed.

(5) Acceleration costs, but only if agreed to in advance, in writing, by the Owner.

.10 RCOs that include a proposed adjustment of Contract Time shall comply with the following:

a. The Contractor's RCO for an adjustment of Contract Time must be substantiated by an analysis of the critical path method schedules in use on the Project. For the delay event, the Contractor must utilize the accepted progress schedule with a data date immediately prior to the date that the alleged delay event occurred (or utilize the schedule update with a data date immediately prior to the date that the alleged delay event occurred), and compare the project critical path to the critical path of the accepted project schedule with a data date immediately after the date the alleged delay event ended (or the schedule update with a progress schedule data date immediately after the date the alleged delay event ended). The comparison of these two accepted project schedules, or schedule updates, must show that the project completion date was delayed by the delay event and the number of days of delay caused by the delay event.

(1) If the analysis shows that a delay has occurred to the project completion date due to the delay event, the Contractor must identify from this analysis the specific critical activities that have been delayed and the magnitude in calendar days of each delay.

(2) For all delays identified as described above, the Contractor must identify the activities that the Contractor believes were delayed by the Owner and the reasons why it believes the Owner should be considered responsible for the delay. The Contractor must also identify any delays that the Contractor believes are concurrent and describe how the Owner and the Contractor concurrently caused the delay.

(3) In addition to the requirements set forth above, if abnormal inclement weather conditions are the basis for a request for an adjustment of Contract Time, such Claim shall be documented by National Weather Service data for Orlando International Airport (OIA) substantiating that weather conditions were abnormal for the period of time as compared to the average weather conditions for OIA over the preceding ten (10) years and could not have been reasonably anticipated. For rainfall, fog or temperature conditions the calendar month will be used as the period of time over which these effects are evaluated. Adjustments of Contract Time will not be allowed for recorded rainfall, fog or temperature conditions less than or equal to the monthly ten (10) year historical mean conditions. Significant rainfall accumulations, for or temperature conditions recorded above the historical monthly mean may be considered as a basis for a day for day adjustment of time due to abnormal inclement weather. No compensation will be allowed for delays resulting from abnormal inclement weather. All Claims for adjustments of time based on weather must be substantiated by showing the adverse effect on critical path construction activities.

b. If the Contractor is delayed in performance of the Work by any act or omission of the Owner, OAR or by any member, officer, employee, agent, servant, or representative of the Owner or OAR, or by any separate contractor or consultant engaged by the Owner or OAR, or by changes in the Work ordered by the Owner (as reflected in COs, CCDs, or FCOs), or by fire, or any unforeseen cause which the Contractor lacked any ability to control or manage, including unavoidable supply chain, product scarcity and delivery issues, all of which occurred without any responsibility, fault or negligence on the part of the Contractor and, in the opinion of the Owner, neither could have been anticipated nor avoided by the Contractor, then the Contract Time shall be extended for an appropriate period of time to compensate the Contractor for the delay, which in no event shall exceed a day-for-day extension for the period of proven actual delay to the critical path as described above; provided that the Contractor has complied with the notice requirements of GP-50 and submitted full documentation supporting the request. Neither labor disputes involving the Contractor, its Subcontractors or any other laborers or materialmen performing the Work, nor abnormal inclement weather conditions, shall be considered to be unforeseeable, unavoidable or unanticipated. An extension of the Contract Time shall be the Contractor's sole and exclusive remedy for any delay of any kind or nature, except to the extent the delays were solely caused by

(1) material acts or material omissions by the Owner or parties for whom the Owner bears responsibility constituting active interference or (2) concealed or unknown conditions as set forth in GP-50. For these delays, the Contractor is only entitled to the reasonable actual costs that are caused directly and solely by the delay and allowed for Contract Modifications as set forth in GP-40. The Owner's exercise of any of its rights or remedies, including, without limitation, ordering changes in the Work, or suspending, rescheduling or ordering correction of the Work, regardless of the extent or frequency of Owner's exercise of such rights or remedies, shall not be construed as active interference.

c. *In no event, including circumstances in which it is alleged or proven that Owner intentionally interfered with the Contractor's performance of the Work, shall the Contractor be entitled to recover from the Owner, for itself or its Subcontractors, suppliers or other parties claiming a right or damage by or through Contractor, any of the following items or damages arising out of or related to this Contract or the breach thereof:*

   (1) loss of profits or anticipated profits
   (2) inefficiency or loss of productivity
   (3) acceleration costs not specifically agreed to in advance, in writing, by the Owner
   (4) home office overhead
   (5) any cost that is not specifically allowed by GP-40.
   (6) indirect, incidental, consequential or special damages, including but not limited to, loss of bonding capacity, loss of bidding or loss of business or contracting opportunities or other impact costs.

.11 The Contractor, on behalf of itself and its Subcontractors and Suppliers, represents that all allowable costs furnished by the Contractor to the Owner for any CO, CCD, FCO or Force Account Work, shall be fair, reasonable, accurate, complete and current at the time of submission. In addition to any other rights and remedies provided to the Owner by the Contract Documents, the Owner shall have the right to adjust the Total Contract Price to (1) exclude any amounts by which the Owner determines any CO, CCD, FCO or Force Account Work was increased due to inaccurate information and (2) recover interest on all excess amounts paid to the Contractor at the legal rate of interest. The Contractor and its Subcontractors shall be required to include these provisions in any Subcontracts entered into for this Project.

.12 Mark-up is defined as the amount to be included in the Contract Modification as the Contractor's overhead and profit, and includes all compensation for all costs associated with general conditions, all home office costs, supervision (home office, project managers, project engineers and superintendents and all salaried employees of the Contractor that have been assigned to the Project), cost estimating services, consumables, small tools, layout, coordination, as-built drawings and all other costs not specifically allowed in GP-40. No separate payment shall be allowed for any expense that is included in the mark-up.

.13 Unless otherwise agreed by the parties, the amount of mark-up shall be determined separately for each work item and is calculated as a percentage of the costs that are specifically allowed in GP-40. The amount of mark-up shall not exceed the following percentages:

Cost of Work Item	*(A) Contractor's Mark-up on Work by Contractor's Own Forces*	*(B) Contractor's Mark-up on Work Performed by Subcontractors or Suppliers*	*(C) First Tier Subcontractors' Mark-up on All Work*
$1 to $25,000	*15%*	*10%*	*15%*
$25,001 to $500,000	*12%*	*8%*	*12%*
$500,001 and above	*10%*	*6%*	*10%*

a. *No mark-up is allowed for work items when the change in quantity is within the limits allowed by GP-40. If, pursuant to GP-40, it is necessary to revise the unit price, the mark-up included in the revised unit price shall not exceed the limits in the foregoing table.*
b. *The mark-up payable to the Contractor for administration of Work performed by its own forces shall not exceed the appropriate percentage in Column A. This mark-up does not apply to any Subcontractors or Suppliers of any tier.*
c. *The mark-up payable to the Contractor for administration of Work performed by Subcontractors or Suppliers shall not exceed the appropriate percentage in Column B. This mark-up shall be applied one time only by the Contractor on the total value of work performed by all Subcontractors and Suppliers of any tier. Distribution of this markup to Subcontractors and Suppliers, regardless of tier, is the responsibility of the Contractor.*
d. *The markup allowed for each first tier Subcontractor shall not exceed the appropriate percentage in Column C. This mark-up shall be applied one time only by each first tier Subcontractor on the total value of all work performed by the Subcontractor and all its lower tier subcontractors or suppliers. The first-tier Subcontractor is responsible for distribution of its mark-up among all lower-tier firms. No lower tier subcontractor is allowed to mark-up their own work since their mark-up is to be distributed by the first-tier Subcontractor.*
e. *.For deductive changes, the amount of the credit shall be the net amount of the change plus a mark-up to be negotiated between the Owner and the Contractor.*
f. *There shall be no mark-up allowed on the cost of bonds, insurance, permitting, or transportation and living expenses.*

2. *CHANGE ORDERS (CO)*

.1 *A CO is a written contract modification signed by the Owner and Contractor stating their agreement upon all of the following:*

a. *a change in the Work or the Contract Documents; and*
b. *the amount of the adjustment in the Total Contract Price, if any; and*
c. *the extent of the adjustment in the Contract Time, if any.*

.2 *Provided the Contractor executes the CO, the Owner may issue a CO Notice to Proceed in accordance with the Owner's Policies. The CO Notice to Proceed authorizes the CO work pending the Owner's execution of the CO.*

3. *CONSTRUCTION CHANGE DIRECTIVES (CCD)*

.1 *A CCD is a written order prepared and signed by the Owner directing a change in the Work or*

stating a proposed basis for adjustment, if any, in the Total Contract Price or Contract Time, or both. The Owner may, by CCD, without invalidating the Contract, order changes in the Work within the general scope of the Contract which the Contractor is required to complete, consisting of additions, deletions or other revisions, the Total Contract Price or Contract Time being adjusted accordingly.

.2 A CCD shall be used in the absence of total agreement on the terms of a CO.

If the CCD provides for an adjustment of the Total Contract Price, the amount of the adjustment shall be based upon the Force Account provisions set forth below or the Owner's best estimate of the actual cost of the Work.

.3 Upon receipt of an Owner-executed CCD, the Contractor shall promptly proceed with the change involved and advise the OAR in writing of the Contractor's agreement or disagreement with the method, if any, provided in the CCD for determining the proposed adjustment in the Total Contract Price or Contract Time.

.4 The Owner shall pay the Contractor for the actual work performed by the Contractor on the basis of the CCD in accordance with Section 90 pending total agreement on the terms of a CO to resolve all remaining disputes concerning adjustments of Total Contract Price and/or Contract Time related to the CCD work. Any payments or adjustment, made in the Owner's discretion, shall not constitute an admission by the Owner of liability for those payments or adjustment and shall not constitute a waiver of any of the Owner's or Contractor's rights under the Contract Documents.

4. FIELD CHANGE ORDERS (FCO)

.1 A FCO may be issued in accordance with the Owner's Policies, and is a written contract modification signed by the Owner and Contractor stating their agreement upon all of the following:

a. A change in the Work or the Contract Documents; and
b. The method intended for and the estimated amount of the adjustment in the Total Contract Price and Contract Time, if any.

.2 A fully executed FCO authorizes the Contractor to immediately proceed with the changed Work. FCOs shall be incorporated into the Contract by appropriate CO or CCD. For FCOs that include Not to Exceed pricing and/or Force Account work, the Contractor shall submit all required final pricing and documentation to the OAR within thirty (30) days from the completion of the FCO work.

5. FORCE ACCOUNT WORK

.1 Force Account Work shall only include the same costs as those allowed by GP-40 and shall be documented and verified jointly by the Contractor and the OAR. The Contractor bears the responsibility for obtaining daily approval of all allowable Force Account charges described below. The Contractor shall not be paid for any claims whatsoever arising from unapproved charges. The Contractor shall provide documentation requested by the OAR including but not limited to:

a. Time sheets which shall be approved daily by the OAR (or authorized site representative, designated for this purpose) for the actual hours spent for manpower and equipment listed.

b. Labor cost accounting records that evidence the net direct cost of the Contractor's labor and foremen while directly performing the Force Account Work activity, but excluding any costs associated with any of the Contractor's superintendents, project engineers, or project managers
c. Equipment cost accounting records that evidence the cost of rented equipment or the Contractor's equipment for the Force Account Work activity.
d. Material cost accounting records that evidence the net costs of materials foe the Force Account Work activity.

.2 Within seven (7) days of the completion of the Force Account Work, the Contractor shall compile and submit to the OAR a Force Account Reconciliationthat contains the backup documentation for each element of the Force Account Work. A Force Account Reconciliation shall set forth all impacts associated with the Force Account Work, and shall comply with GP-50. The Contractor's final mark-up for overhead and profit shall be determined according to the cumulative cost of the Force Account Work in accordance with GP-40.

.3 The Contractor specifically agrees that no other Claims whatsoever shall be asserted against the Owner for such Force Account Work. If the Project includes multiple changes that are to be paid by Force Account, each Force Account Reconciliationshall be documented and processed separately.

.4 Upon verification of the Force Account Reconciliation, the OAR will prepare a CO for the Force Account Work.

1. MINOR CHANGES IN THE WORK

.1 A minor change in the Work may be issued by the OAR when there is no cost for the change and when no adjustment to the Contract Time will be made. A minor change may be issued as a Designer's Supplemental Instruction (DSI), as a written response to a Request for Information or in any other manner that the OAR deems appropriate.

40-035 OMITTED ITEMS.
The Owner~~, the Owner's Engineer or the RPR~~ may provide *a Contract Modification* ~~written notice to the Contractor~~ to omit from the ~~w~~*W*ork any ~~c~~Contract item ~~that does not meet the definition of major Contract item. Major Contract items may be omitted by a supplemental agreement~~. Such omission of Contract items shall not invalidate any other Contract provision or requirement.

Should a Contract item be omitted or otherwise ordered to be nonperformed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with Section 90, paragraph 90-04, PAYMENT FOR OMITTED ITEMS.

40-046 EXTRA WORK.
Should acceptable completion of the Contract require the Contractor to perform an item of work not provided for in the awarded Contract as previously modified by *a Contract Modification* ~~change order, or supplemental agreement~~ Owner may issue a *Contract Modification* to cover the necessary ~~E~~xtra ~~w~~*Work*. ~~Change orders~~ *Contract Modification for* ~~e~~*Extra* ~~w~~*Work* shall contain agreed unit prices for performing the ~~change order~~ *Extra* ~~w~~*Work* in accordance with the requirements specified in the *Contract Modification* ~~order~~ and shall contain any adjustment to the Contract Time that, in the Owner's opinion, is necessary for completion of the ~~e~~*Extra* ~~w~~*Work*.

When determined by the Owner to be in the Owner's best interest, the ~~RPR~~OAR may order the Contractor to proceed with ~~E~~xtra ~~w~~*Work* as provided in Section 90, paragraph 90-05, PAYMENT FOR EXTRA WORK. Extra ~~w~~*Work* that is necessary for acceptable completion of the ~~p~~*Project*, but is not within the general scope of the Work covered by the original Contract, shall be covered by a *Change Order* ~~supplemental agreement~~ as defined in Section 10~~, paragraph 10-70, SUPPLEMENTAL AGREEMENT~~.

If ~~E~~xtra ~~W~~ork is essential to maintaining the ~~p~~*Project* critical path, ~~RPR~~ *Owner* may *direct the OAR to* order the Contractor to commence the ~~E~~xtra ~~w~~*Work* under a ~~Time and Material contract~~ Force Account method. Once sufficient detail is available to establish the level of effort necessary for the ~~e~~*Extra* ~~W~~ork, the Owner shall initiate *a Contract Modification* ~~change order or supplemental agreement~~ to cover the ~~e~~*Extra* ~~w~~*Work*.

Any claim whatsoever for payment of Extra Work that is not covered by *a Contract Modification* ~~written agreement (change order or supplemental agreement)~~ shall be rejected by the Owner.

40-0~~5~~7 MAINTENANCE OF TRAFFIC.

It is the explicit intention of the Contract that the safety of *the public*, aircraft, as well as the Contractor's equipment and personnel, is the most important consideration. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP).With respect to his/her own operations and the operations of all his/her subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying: personnel; equipment; vehicles; storage areas; and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport.

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to their own operations and the operations of all subcontractors as specified in Section 80, paragraph 80-05, LIMITATION OF OPERATIONS. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in Section 70, paragraph 70-15, CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS.
b. With respect to their own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport in accordance with the construction safety and phasing plan (CSPP) and the safety plan compliance document (SPCD).

c. When the Contract requires the maintenance of an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the Contract, plans, and specifications, the Contractor shall keep the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at their expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (http://mutcd.fhwa.dot.gov/), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways.

40-0~~6~~8 REMOVAL OF EXISTING STRUCTURES.
All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the Work for which the disposition is not indicated on the plans, the ~~Resident Project Representative (RPR)~~ *Owner and OAR* shall be notified. *Written direction from the Owner or OAR is required* prior to *Contractor* disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the ~~RPR~~ *OAR* in accordance with the provisions of the Contract.

Except as provided in Section 40, paragraph 40-09, RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the Work) shall be used in the Work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the Work.

40-0~~7~~9 RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK.
Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the C~~c~~ontract to be ~~either~~ embankment, the Contractor may at their own option either:

a. Use such material in another contract item, providing such use is approved by the ~~RPR~~ *Designer* and is in conformance with the Contract specifications applicable to such use; or,

b. Remove such material from the site, upon written approval of the ~~RPR~~ *Designer*; or

c. Use such material for the Contractor's own temporary construction on site; or,

d. Use such material as intended by the terms of the Contract.

Should the Contractor wish to exercise option a., b., or c.,it shall request the ~~RPR's~~ *Designer's* approval in advance of such use.

Should the ~~RPR~~ *Designer* approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable C~~c~~ontract *unit* price. The Contractor shall replace, at their expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the C~~c~~ontract W~~w~~ork. The Contractor shall not be charged for use of such material so used in the Work or removed from the site.

Should the ~~RPR~~ *Designer* approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable C~~c~~ontract *unit* price, for furnishing and installing such material in accordance with requirements of the C~~c~~ontract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim *whatsoever* for delays by reason of their own exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the Work, except where such excavation or removal is provided for in the ~~c~~*Contract*, plans, or specifications.

40-10 CLEANING UP

The Contractor, on a daily basis, shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under the Contract. The Contractor shall not dispose of debris or waste material on the Owner's property or in waste containers (dumpsters) leased by the Owner without prior approval of the Owner. If the Contractor fails to keep the site clean, then, following the Owner's 48 hour written notice to the Contractor, the Owner may take appropriate action to clean the site and charge such costs to the Contractor.

40-0811 FINAL CLEANING UP.

Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of such property owner.

40-12 WARRANTY

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly authorized by the Owner, may be considered defective. If required by the OAR or Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment provided in the Work. Warranties required by the Contract Documents shall commence on the Date of Substantial Completion, unless otherwise provided in the Contract Documents. The Contractor shall deliver all required warranty documents before submitting the final application for payment. When the specifications require that a warranty shall be for longer than one year, the Contractor shall ensure that the warranty is issued directly to the Owner as the original purchaser warrantee. Any breach of the warranties will be a breach of this Contract.

40-13 TAXES

The Contractor shall pay all sales, consumer, use or similar taxes for the Work or portions thereof provided by the Contractor, unless otherwise specifically provided in the Contract Documents. The Contract Price shall be equitably adjusted by Change Order for additional costs resulting from any changes in taxes enacted after the date the bids were received.

Contractor covenants and agrees that the Work is owned by the Greater Orlando Aviation Authority and neither Contractor nor any successors in interest shall, or have any right to, claim depreciation deductions or investment tax credits for federal income tax purposes with regard to the Work.

40-14 GOVERNING LAW

The Contract shall be governed by the laws of Florida.

40-15 SUCCESSORS AND ASSIGNS

The Contractor binds itself, its successors, assigns and legal representatives to the Owner and the Owner's successors, assigns and legal representatives in respect to covenants, agreements and obligations contained in the Contract Documents. The Contractor shall not assign the Contract in whole or in part

without written consent of the Owner, which consent may be granted or withheld in the Owner's sole discretion.

Any transfer of this Contract by merger, consolidation or liquidation or (unless the stock of the Contractor is traded on a national stock exchange or in a generally recognized over the counter securities market) any change in ownership of or power to vote a majority of the outstanding voting stock or ownership interests of the Contractor shall constitute an assignment of this Contract for the purposes of this Contract. In the event the Contractor assigns or attempts to assign any right or obligation arising under this Contract without the Owner's prior written consent, the Owner shall be entitled to terminate this Contract, in the Owner's sole discretion.

40-16 WRITTEN NOTICE

Written notice shall be deemed to have been duly served to the Owner if delivered in person, by electronic mail (e-mail), accompanied with a duplicate copy of the notice sent via regular mail within three (3) business days to those persons identified as representatives of the Owner and OAR, unless changed through an acceptable means of written notice. Any written notice shall be deemed duly served upon the earlier of the date of receipt if sent via certified mail, or the date of transmission if sent via e-mail or delivered in person.

Written notice shall be deemed to have been duly served to the Contractor if delivered in person, by certified mail, or by electronic mail (e-mail) accompanied with a duplicate copy of the notice sent via regular mail within three (3) business days to those persons identified as representatives of the Contractor in the Contractor's Bid, or to those persons the OAR and/or Owner reasonably believes are the active Program Manager or Project Executive (or similar) on the Project. Any written notice shall be deemed duly served upon the earlier of the date of receipt if sent via certified mail, or the date of transmission if sent via e-mail or delivered in person.

40-17 RIGHTS AND REMEDIES

Duties and obligations imposed by the Contract and rights and remedies available thereunder shall be in addition to duties, obligations, rights and remedies otherwise imposed or available by law.

The invalidity or unenforceability of any portion or provision of this Contract shall in no way affect the validity or enforceability of any other portion or provision thereof. Any invalid or unenforceable portion or provision shall be deemed severed from this Contract and the balance of the Contract shall be construed and enforced as if the Contract did not contain such invalid or unenforceable portion or provision. In the event any such portion or provision of this Contract is declared invalid, the Parties shall promptly negotiate in good faith new provisions to eliminate such invalidity and to restore this Contract as near as possible to its original intent and effect.

In order that the Parties to this Contract may fully exercise their rights and perform their obligations hereunder arising from the performance of the Work, any provisions of this Contract that are required to ensure exercise of such rights or performance shall survive termination of this Contract regardless of the cause for such termination and regardless of whether such termination applies to all or only part of the Contract. Without limitation, all audit provisions shall survive termination of this Contract and all indemnification provisions shall survive the expiration of this Contract with respect to any acts or omissions occurring during the term of this Agreement and shall not be affected or reduced by any information with which the Owner has been provided or may otherwise obtain in the future. No provision of the Contract Documents shall be construed to limit the Contractor's liability for, without limitations, defects (latent or patent) in the Work, warranty claims, or to limit recourse to the Contractor's surety.

40-18 INTEREST

All interest due and payable by the Owner to the Contractor or by the Contractor to the Owner shall be at the legal statutory rate of interest.

40-19 REPRESENTATIONS AND WARRANTIES

The Parties represent and acknowledge that they have been provided with the opportunity to discuss and review the terms of this Contract with their respective attorneys before signing it and that they are freely and voluntarily signing this Contract in exchange for the benefits provided herein. The Parties further represent and acknowledge that they have been provided a reasonable period of time within which to review the terms of this Contract Bidder acknowledges that any unauthorized additions, conditions, limitations, or exceptions to the Bid Documents or Contract Documents or any unauthorized conditional or alternate pay items may render its Bid nonresponsive.

The Contractor and Owner represent and warrant to the other that (1) the execution and delivery of the Contract and the performance of the acts and obligations to be performed by each of them have been duly authorized by all necessary corporate (or, if appropriate, partnership) resolutions or actions; and (2) the Contract does not conflict with or violate any agreements to which either party is bound, or any judgment, decree or order of any court against or affecting such party.

The Contractor expressly warrants that no officer, employee, or agent of the Owner or of the Owner's Board has any interest, either indirectly or directly, in the business of the Contractor. The Contractor further warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Contractor, to solicit or secure this Contract, and that it has not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for the Contractor, any fee, commission, percentage, gift or any other consideration contingent upon or resulting from the award or making of this Contract and that it has not agreed to employ or retain the services of any firm or person in connection with performing the Work hereunder.

Pursuant to Section 287.133(2) (a), Florida Statutes, A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal or reply on a contract to provide any goods or services to a public entity, may not submit a bid, proposal or reply on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount set forth in Florida Statutes s.287.017, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list. The Contractor hereby represents that it does not fall within the class of persons identified in the previous sentence such that Contractor would be precluded from entering into this Contract.

END OF SECTION 40

SECTION 50 CONTROL OF WORK

50-01 AUTHORITY OF THE DESIGNER

~~The RPR has final authority regarding the interpretation of project specification requirements. The RPR shall determine acceptability of the quality of materials furnished, method of performance of work performed, and the manner and rate of performance of the work. The RPR does not have the authority to accept work that does not conform to specification requirements.~~

The Designer shall decide all questions which may arise as to the interpretation of the Specifications or Plans relating to the Work.

The Designer will visit the Project site at appropriate intervals to become generally familiar with the progress and quality of the Work and to determine in general if the Work is being performed in a manner such that when the Work is completed it will be in accordance with the Contract Documents. The Designer will not make exhaustive or continuous on-site inspections to check quality or quantity of the Work unless otherwise provided in the Contract Documents.

Based on the Designer's periodic site observations, the Designer may review the amounts approved by the OAR due the Contractor on each Application for Payment and will advise the Owner of any apparent issues with the amount requested for payment or with the amount approved by the OAR for payment.

The Designer will review and take appropriate action upon the Contractor's Submittals that are defined in the Contract Documents, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Designer's action will be taken with such reasonable promptness as to avoid or minimize delay in the Work or in the activities of the Owner, Contractor, or separate contractors, while allowing sufficient time to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Designer's review of the Contractor's Submittals shall not relieve the Contractor of the obligations of the Contract Documents. The Designer's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Designer, of any construction means, methods, techniques, sequences or procedures. The Designer's review of and action concerning a specific item shall not indicate review of and action concerning an assembly of which the item is a component.

The Designer is the interpreter of the technical requirements and intent of the Contract Documents. The Designer, within a reasonable period of time after receipt of a written request therefore, shall render such interpretations in writing or in the form of drawings to the OAR for forwarding to the Contractor.

The Designer will conduct inspections with the OAR and Contractor to determine if the requirements for Substantial Completion have been satisfied, to prepare the Designer's Substantial Completion punch list, to ensure the Designer's punch list work has been completed and to confirm the requirements for Final Completion have been satisfied. The OAR will receive and forward to the Designer for review written warranties and related close-out documents required by the Contract Documents and assembled by the Contractor.

The Designer will not have control over, charge of or be responsible for construction means, methods, techniques, or procedures, or for safety precautions and programs in connection with the Work. These are solely the Contractor's responsibility.

50-02 ROLE OF THE OWNER'S AUTHORIZED REPRESENTATIVE (OAR)

The OAR shall provide administration of the Contract as described in the Contract Documents and shall be selected by the Owner. The specific person or entity which will perform the OAR's responsibilities shall be identified by the Owner. The Owner may be the OAR and the Owner has authority to perform any of the actions that the OAR may perform.

The OAR is the party through whom all communications shall be transmitted to and from the Contractor unless otherwise provided in the Contract Documents. However, the Owner and Contractor are not precluded from direct communications. The Contractor shall copy the OAR with all communications between the Owner and the Contractor if such direct communication occurs. Communications by and with Subcontractors and material Suppliers shall be through the Contractor. The Contractor's communications with the Designer or with separate contractors shall be through the OAR.

The OAR will receive and process the Contractor's submittals, including transmitting the Submittals to the Designer and returning the Designer's comments or approvals to the Contractor with such reasonable promptness as to avoid or minimize delay in the Work or the activities of the Owner, Contractor or separate contractors, while allowing sufficient time for the Designer's review, but not less than 14 days after receipt unless otherwise specified in the Contract Documents. The OAR's processing and review of the Submittals shall not relieve the Contractor of its obligations under the Contract Documents and shall not constitute approval of safety precautions or any means, methods, techniques, sequences or procedures.

The OAR is authorized to reject Work which does not conform to the Contract Documents. Whenever the OAR considers it necessary or advisable, the OAR is authorized to require additional inspection, examination or testing of the Work, regardless of the stage of completion or delivery of the Work. However, neither this authority of the OAR nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the OAR to the Contractor, Subcontractors, material and equipment Suppliers, their agents or employees, or other persons performing portions of the Work.

The OAR will prepare or assist the Owner in preparing Change Orders, Construction Change Directives, and Field Change Orders. The OAR may authorize minor changes in the Work as provided in these General Provisions.

The OAR, in conjunction with the Designer and the Contractor, will conduct inspections to determine the date or dates of Substantial Completion and the date of Final Completion, will receive and forward to the Owner, for the Owner's review and records, written warranties and other documents required by the Contract Documents and assembled by the Contractor, and will execute a final Certification for Payment upon the Contractor's compliance with the requirements of the Contract Documents. Receipt by the OAR or Owner of warranties and other documents at variance with the requirements of the Contract Documents shall not be deemed acceptance of a modification to the Contract Documents or a waiver of any requirement of the Contract documents.

The OAR will not have control over, charge of or be responsible for construction means, methods, techniques, or procedures, or for safety precautions and programs in connection with the Work. These are solely the Contractor's responsibility. However, in the event the Contract Documents expressly require the Contractor to use specific means, methods, techniques, or procedures, the Contractor shall perform the Work in accordance with those express requirements.

The *OAR* does not have the authority to accept pavements that do not conform to FAA specification requirements.

50-023 CONFORMITY WITH PLANS AND SPECIFICATIONS.
All ~~work~~ *Work* and all materials furnished shall ~~be in reasonably close conformity~~ *conform* ~~with~~ *to* the lines, grades, grading sections, cross sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the Contract, Plans or Specifications.

If the ~~RPR~~ *OAR* finds the materials furnished, Work performed, or the finished product *do* not ~~within reasonably close conformity with~~ *conform to* the Plans and Specifications, but that the portion of the Work affected will, in their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, ~~the RPR~~ they will advise the Owner of their determination that the affected Work be accepted and remain in place. The ~~RPR~~ *OAR* will document the determination and recommend to the Owner a basis of acceptance which will provide for an adjustment in the Contract Price for the affected portion of the Work. Changes in the Contract ~~p~~*Price* must be covered by *a Contract Modification.* ~~contract change order or supplemental agreement as applicable~~.

If the ~~RPR~~ *OAR* finds the materials furnished, Work performed, or the finished product ~~are not in reasonably close conformity with~~ *do not conform to* the Plans and Specifications and have resulted in an unacceptable finished product, the affected Work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the ~~RPR's~~ *OAR's* written orders.

~~The term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the Work in accordance with the Contract, Plans, and Specifications. The term shall not be construed as waiving the~~ *Nothing in this section shall waive the* ~~RPR's~~ *OAR's* responsibility to insist on strict compliance with the requirements of the Contract, Plans, and Specifications during the Contractor's execution of the Work, when, in the ~~PRP's~~ *OAR's* opinion, such compliance is essential to provide an acceptable finished portion of the Work.

~~The term "reasonably close conformity" is also intended to provide the RPR~~ *Nothing in this section shall waive the OAR's* ~~with the~~ authority, after consultation with the *Owner* ~~Sponsor~~ and FAA, to use good engineering judgment in his/her determinations as to accept Work that is not in strict conformity, but will provide a finished product equal to or better than that intended by the requirements of the Contract, Plans and Specifications.

The ~~*OAR will not be responsible for the*~~ Contractor~~'s~~ *shall be solely responsible for its* means, methods, techniques, sequences, or procedures of construction ~~or~~ *and* the safety precautions incident thereto.

50-04 LIST OF SPECIAL PROVISIONS.
None.

50-05 SUBMITTALS - SHOP DRAWINGS, PRODUCT DATA AND SAMPLES
Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, manufacturer, Supplier or distributor to illustrate some portion of the Work.

Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be accepted.

Shop Drawings, Product Data, Samples and similar submittals (all of which shall be referred to as

"Submittals") are not changes to the Contract Documents, unless incorporated by a Contract Modification. The purpose of Submittals is to demonstrate for those portions of the Work for which Submittals are required, the manner in which the Contractor proposes to conform to the Contract Documents.

Unless the Specifications provide otherwise, the Contractor shall review, approve and submit to the OAR, for review, all Submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. The Contractor shall furnish the Submittals in the format and quantity required by the specifications. By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such Submittals with the requirements of the Work and of the Contract Documents. Submittals that have not been approved by the Contractor shall be returned by the OAR to the Contractor without review.

The Contractor shall perform no portion of the Work nor purchase any materials requiring review of Submittals until the relevant Submittal has been reviewed and accepted in the manner set forth in the Contract Documents. All Work shall be performed in accordance with Submittals which have been reviewed and returned by the OAR in accordance with the Contract Document. Review and return of the submittal does not constitute acceptance by the Owner of any modification to the Contract Documents See GP-50. When Submittals are not fully accepted through no fault of the Owner, the Contractor shall revise and resubmit Submittals at no additional cost to the Owner; no Contract Time extensions shall be allowed for revisions and resubmission of Submittals.

If the Contractor proposes to deviate from the requirements of the Contract Documents, the Contractor shall separately submit, and identify prominently on the transmittal cover sheet(s) for the Submittal, all proposed deviations from the requirements of the Contract Documents. The Contractor shall provide detailed justification for any deviation request. The Contractor's transmittal cover sheet(s) shall direct, in writing, attention to the specific proposed deviations, and the Submittal shall contain all required data and supporting documentation necessary for evaluation of the proposed deviation. The Owner will make all final determinations for acceptance of the proposed deviation. Any Submittal containing deviations not identified as previously described shall be deemed rejected and require resubmission. When requesting a deviation, the Contractor shall also make the representations contained in the specifications. The Contractor's request for a deviation shall not entitle the Contractor to a time extension.

The Contractor shall direct specific attention, in writing, to any revision(s) on resubmitted Submittals, other than those requested on previous Submittals.

Informational submittals identified in the Contract Documents do not require responsive action. When the Contract Documents require the Contractor to submit professional certification of performance capabilities of materials, connections, assemblies, systems, equipment, or other aspects of the Work, the Owner shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

Review or acceptance of Submittals or any related documents by Owner or OAR (or those at their direction) shall not in any way relieve the Contractor of the technical adequacy and accuracy of the Work, nor shall it be construed as a waiver of any of the Contractor's obligations or liability that may arise under the Contract or out of performance of the Work.

When Shop Drawings, Product Data or Physical Samples are returned to the Contractor stamped REJECTED, NOT APPROVED, RETURNED FOR CORRECTIONS or otherwise not accepted through no fault of the Owner, the Contractor may be required to reimburse the Owner for its additional expenses incurred as a result of the Contractor's failure to comply with submittal requirements up to a maximum of:

Drawing Sheets - $400.00/Drawing Sheet
Product Data - $100.00/Cut Sheet
Physical Samples - $200.00/Sample

Such sums reflect the damages suffered by the Owner as a result of the Contractor's deficient performance, the actual amount of which cannot be accurately determined as of the time this Contract is awarded, and not as a penalty. The foregoing amounts may be withheld (cumulatively) from the Contractor's Application for Payment each month, as applicable. At or before Final Completion, a deductive Contract Modification may be issued to the Contractor by the Owner to reflect all such deductions. These damages shall be in addition to, and not in restriction of, the Owner's other rights and remedies arising from the Contract Documents or law.

50-036 COORDINATION OF CONTRACT, PLANS, AND SPECIFICATIONS.

The Contract, plans, specifications, and all referenced standards cited are essential parts of the Contract requirements. If electronic files are provided and used on the project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, ~~calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern~~ *the order of precedence for the Contract shall be as follows:*

1. *Contract Modifications*
2. *Executed Contract Agreement*
3. *Bid Addenda*
4. *Special Conditions*
5. *Supplemental Conditions*
6. *General Conditions*
7. *Specifications and Drawings. Drawings take precedence over Specifications as to quantity and location. Specifications take precedence over Drawings as to quality of materials and workmanship.*
8. *Cited standards for materials or testing and cited Advisory Circulars (ACs)*
9. *Unit Price Schedules contained in the Contractor's Bid*
10. *Instructions to Bidders and all portions thereof containing information required from the Contractor*
11. *Invitation to Bid*
12. *Calculated dimensions*
13. *Measurements by Scale*

The more stringent requirements shall apply in the event any conflict cannot be resolved by applying the order of precedence.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the ~~RPR~~ *OAR* for an interpretation and decision, and such decision shall be final.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, Contractor shall immediately notify

the ~~Owner or the designated representative~~ *OAR* in writing requesting their written interpretation and decision. *The Contractor shall obtain written clarification from the OAR before proceeding with any Work affected by any conflict, error, ambiguity, discrepancy, inconsistency or omission. In addition, if the Contractor performs any construction activity which the Contractor knows or should have known contains an error, inconsistency or omission, the Contractor shall be responsible for such performance and shall bear the cost for correction.*

50-07 REVIEW OF CONTRACT AND FIELD CONDITIONS BY CONTRACTOR

The Contractor acknowledges and declares that the Contract Documents are sufficient to enable the Contractor to complete the Work as shown in the Contract Documents or, if not specifically shown, to perform the activities which may be reasonably inferred as necessary for completion of the Work in accordance with the requisite time frame, applicable laws, statutes, building codes, regulations, or as otherwise required by the Contract Documents.

The Contractor shall take field measurements, verify field conditions and carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing activities. Errors, inconsistencies or omissions discovered shall be immediately reported in writing to the OAR, and in no event later than seven (7) days after discovery by the Contractor. *If the Contractor performs any construction activity which the Contractor knows or should have known contains an error, inconsistency or omission, the Contractor shall be responsible for such performance and shall bear the cost for correction.*

The Contractor represents that it is familiar with the Project site and has received all information it needs concerning the conditions of the Project site. The Contractor represents that it has inspected the location of the Work and has satisfied itself as to the location and condition thereof, including, without limitation, the location and condition of all structures, utilities, and surface and subsurface conditions. At no additional cost to the Owner, the Contractor shall undertake all further investigations and studies as may be necessary or useful to determine the location and condition of structures, utilities, surface and subsurface conditions. The Contractor shall exercise special care in executing Work in proximity of known utilities, improvements, and easements. The Contractor shall be solely responsible for the location of any existing utilities. Based upon the foregoing inspections, understandings, agreements and acknowledgments, the Contractor agrees and acknowledges: (i) that the Total Contract Price is just and reasonable compensation for all the Work, including all reasonably foreseen and foreseeable risks, hazards, and difficulties in connection therewith; (ii) that the Contract Time is adequate for the performance of the Work; and (iii) that the Work shall not result in any unintended lateral or vertical movement of any existing structure. The Contractor shall have no claims whatsoever for concealed or unknown conditions except as described in GP-50-28.

At the Owner's request, the Contractor shall make available to the Owner the results of any surface or subsurface investigations of the site, test borings, analyses, studies or other tests conducted by or in possession of the Contractor or any of its agents.

The Contractor shall review the Contract Documents to determine the applicability of any and all laws, ordinances, rules, regulations and lawful orders of public authorities that may govern the Work. The Contractor shall comply with all laws, ordinances, rules, regulations and lawful orders of public authorities governing the Work and shall give all notices required in connection therewith. In addition, the Contractor shall not knowingly violate any zoning or setback requirement or any provision of any recorded covenant.

The Contractor shall notify the Owner and OAR of any discrepancy or potential conflict between the Contract Documents and any building codes or other law or regulations of which the Contractor has knowledge of or should be reasonably able to determine and if the resolution of the conflict actually impacts the Total Contract Price or Contract Time, a Contract Modification shall be issued in accordance with GP-

40. If the Contractor performs Work contrary to laws, statutes, ordinances, building codes, rules or regulations, the Contractor shall correct the Work and be responsible for all costs associated therewith.

Pursuant to Florida Statute 218.70, the "Public Bid Disclosure Act," the Owner gives notice to the Contractor that the Owner does not issue permits for the Work and accordingly there is no fee assessed by the Owner. However, the City of Orlando and other governmental entities may require fees for building and other permits for the Work. Except for the Owner's non-refundable deposit paid to the City of Orlando for commercial permitting referenced in Section 00 41 13, the Contractor shall secure and pay for all required permits that are necessary for the proper execution and completion of the Work, including, but not limited to, all applicable site permits, building permits, engineering, dewatering, National Pollution Discharge Elimination System (NPDES) stormwater management and all other permits required to complete the Work. In addition, except as defined under Owner's responsibilities in GP-60, the Contractor shall procure all required certificates of inspection, use, occupancy and completion.

50-08 MAINTENANCE OF DOCUMENTS, SAMPLES AND AS-BUILT DRAWINGS AT THE SITE

The Contractor shall maintain at the site all approved Shop Drawings, Product Data, Samples and other required submittals and make such documents available to the Owner, Designer and OAR.

The Contractor shall maintain at the site As-Built Documents comprised of one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to accurately reflect all as-built conditions, including, but not limited to, all locations of utilities as actually determined or installed and all changes to the Work. These As-Built Documents shall be available to the Owner, Designer and OAR at all times. All As-Built Documents shall be delivered to the OAR for review and acceptance upon completion of the Work, signed by the Contractor to certify that they show complete and exact as-built conditions, stating dimensions, sizes, kinds of materials, and similar matters (including, but not limited to, piping and conduit locations). The Contractor shall be held responsible for all damages arising directly or indirectly out of the Contractor's failure to maintain complete and accurate As-Built Documents and other information.

The Contractor shall maintain at the Work site all permit Drawings in a manner so as to make them accessible to governmental inspectors and other authorized agencies at all times. All final updated Permit Drawings shall be delivered to the OAR prior to Final Completion, unless another timeframe has been established by the OAR, in writing.

50-09 ACCESS TO WORK

At all times, the Contractor shall, at no additional cost, provide the Owner, OAR and Designer access to the Work subject to the safety rules and insurance requirements of the particular work area. This access shall include the Contractor's providing reasonable assistance; including, but not limited to, providing ladders, equipment and workers to remove/replace heavy objects.

50-~~05~~10 COOPERATION OF CONTRACTOR.

The Contractor shall be supplied with ~~five hard copies or~~ an electronic PDF of the plans and specifications. The Contractor shall have available on the construction site at all times one hardcopy each of the plans and specifications. ~~Additional hard copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.~~

The Contractor shall give constant attention to the Work to facilitate the progress thereof, and shall cooperate with the ~~RPR~~ *Designer, OAR* and *their* inspectors and with other Contractors in every way possible. The Contractor shall have a competent *Project Manager and* Superintendent on the Work at all

times who is fully authorized as their agent on the Work. The Superintendent shall be capable of reading and thoroughly understanding the Plans and Specifications and shall receive and fulfill instructions from the ~~RPR~~ *OAR* or their authorized representative.

The Contractor shall supervise and direct all portions of the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract including coordination of the duties of all Subcontractors and Suppliers, unless the Contract Documents give other specific instructions concerning these matters.

The Contractor shall control its operations and those of its Subcontractors and Suppliers to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and all other persons performing portions of the Work for which the Contractor is responsible.

The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract either by activities or duties of the OAR in the OAR's administration of the Contract, or by tests, inspections, or approvals required or performed by persons other than the Contractor.

The Contractor shall be responsible for inspection or examination of portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work. The Contractor shall keep full detailed written records of all inspection or examination efforts. These written records shall include dates, subject matter, persons present, results of inspections or examinations and shall be made available to the Owner, if requested.

If any of the Work is required to be inspected or approved by the Contract Documents or by any laws, ordinances, rules, regulations or orders of public authorities, the Contractor shall cause such inspection or approval to be performed. No test, inspection or examination performed or failed to be performed by the Owner, shall be a waiver of the enforcement of any of the Contractor's obligations.

The Contractor is fully responsible to provide a sufficient number of skilled workers, supervision, and project management personnel, to prosecute the Work and insure that the Work is completed within the Contract Time. Failure to fully staff the Project with skilled workers, supervision, or project management personnel shall be cause for termination of the Contract in accordance with GP-80 or such other remedies as set forth in the Contract Documents. The Contractor assumes all risks of delays or extra costs which may be associated with labor disputes involving the Contractor, its Subcontractors or Suppliers and in no event shall the Contractor be entitled to additional compensation or an extension of Contract Time due to any such labor disputes.

50-~~06~~11 COOPERATION BETWEEN CONTRACTORS.

The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the Work not to interfere with or hinder the progress of completion of the Work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with his/her contract and shall protect and save harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced by him because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange their work and shall place and dispose of the materials being used to not interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join their work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others. *The Contractor shall promptly afford the Owner and separate contractors reasonable opportunity for storage of their materials and equipment and performance of their activities and shall coordinate the Contractor's construction and operations with theirs as required by the Contract.*

If the proper execution of the Contractor's Work depends upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with the affected portion of the Work, promptly report to the OAR, with a copy to the Owner, apparent discrepancies or defects in such other construction, if any, that would render it unsuitable for such proper execution. Failure of the Contractor to report discrepancies or defects shall constitute an acknowledgment that the Owner's or separate contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects which are not discoverable at that time through the exercise of reasonable diligence.

The Contractor shall promptly remedy and repair damage caused by the Contractor to completed or partially completed construction, including, without limitation, the Work, or to property of the Owner or separate contractors. Such remedies and repairs shall be at the Contractor's sole expense.

Claims and other disputes and matters in question between the Contractor and a separate contractor shall be subject to the provisions of this Contract with respect to entitlement and recoverable costs. If a separate contractor initiates legal or any other proceedings against the Owner on account of any damage alleged to have been solely caused by the Contractor, the Owner shall notify the Contractor, who shall defend and indemnify the Owner in such proceedings solely at its own expense (including, without limitation, attorneys' fees and costs), or at the Owner's option, pay all defense costs of the Owner including attorney's fees and costs, and if any judgment or award against the Owner arises therefrom, the Contractor shall pay or satisfy it and shall reimburse the Owner for all attorneys' fees and court or other costs which the Owner has incurred over and above those paid directly by the Contractor.

When separate contracts are performed within overlapping limits of construction, or areas which might result in congestion or interference, each contractor shall conduct its work so as not to interfere with or hinder the progress or completion of the work being performed by separate contractors.

Any difference or conflict which may arise between the Contractor and separate contractors related to the Work shall be referred to the OAR for resolution, unless otherwise stated in the Contract Documents. If the Work of the Contractor is delayed because of any work, acts, or omissions of any separate contractor, then only an extension of Contract Time sufficient to compensate for the delay, as determined by the OAR, shall be granted to the Contractor as its sole and exclusive remedy. In no event shall the extension of Contract Time exceed the day-for-day period of delay experienced by the Contractor. The Contractor's entitlement to an extension of Contract Time for such delays shall be conditioned upon timely receipt by the OAR of proper written notice from the Contractor of the cause of the delay, indicating what measures, if any, the Contractor has employed to minimize the effect of the delay.

The Contractor shall be responsible for controlling all labor employed by it and its Subcontractors for performance of the Work so as to avoid any disruption of or disharmony with other labor being used by separate contractors now or hereafter working on the Owner's property. The Contractor further agrees that this provision will be included in all of its subcontracts.

The OAR shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing related construction schedules when directed to do so. The Contractor shall make any revisions to the Progress Schedule deemed necessary after a joint review and mutual agreement. The Progress Schedules shall then be used by the Contractor, separate contractors and the Owner until subsequently revised.

The OAR will be responsible for coordinating the Work of all contractors on the Project when the Project involves more than one contractor. The OAR and Owner have the right to make changes in the Contractor's sequence of operations if in their judgment and sole discretion changing Project conditions require changes in sequence. The Contractor shall modify its sequence of operations and procedures, as required by the OAR and Owner.

The Contractor shall join its Work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others. *The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. The Contractor shall not damage in whole or in part the Work, other Work of the Owner or of separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.*

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials, debris, and rubbish, the Owner may clean up and allocate the cost, in its sole discretion, among those responsible..

50-~~07~~*12* CONSTRUCTION LAYOUT AND STAKES.

The *Designer* shall establish necessary horizontal and vertical control. The establishment of survey control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. Contractor is responsible for preserving integrity of horizontal and vertical controls established by *Designer*. In case of negligence on the part of the Contractor or their employees, *subcontractors, or anyone under the Contractor's control*, resulting in the destruction of any horizontal and vertical control, the resulting costs will be *assessed* ~~deducted as a liquidated damage~~ against the Contractor. The Contractor will be required to furnish all lines, grades and measurements from the control points necessary for the proper prosecution and control of the Work contracted for under these Specifications.

Prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the *OAR* that the Contractor concurs with survey control established for the project. All lines, grades and measurements from control points necessary for the proper execution and control of the Work on this project will be provided to the *OAR*. The Contractor is responsible to establish all layout required for the construction of the project.

Copies of survey notes will be provided to the *OAR* for each area of construction and for each placement of material as specified to allow the *OAR* to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be provided to the *OAR* prior to commencing work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in *DWG and PDF* ~~the following~~ formats.

Laser, GPS, String line, or other automatic control shall be checked with temporary control as necessary. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

No direct payment will be made, unless otherwise specified in Contract *D*ocuments, for this labor, materials, or other expenses. The cost shall be included in the price of the *B*id for the various items of the Contract.

50-~~08~~*13* AUTHORITY AND DUTIES OF QUALITY ASSURANCE (QA) INSPECTORS.
QA inspectors shall be authorized to inspect all Work done and all material furnished. Such QA inspection may extend to all or any part of the Work and to the preparation, fabrication, or manufacture of the materials to be used. QA inspectors are not authorized to revoke, alter, or waive any provision of the Contract. QA inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

QA Inspectors are authorized to notify, *through the OAR,* the Contractor or their representatives of any failure of the Work or materials to conform to the requirements of the Contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the *OAR* for a decision.

50-~~09~~*14* INSPECTION OF THE WORK.
All materials and each part or detail of the Work shall be subject to inspection by the ~~RPR~~ *OAR, Designer and Owner.* The ~~RPR~~ *OAR, Designer and Owner* shall be allowed access to all parts of the Work and shall be furnished with such information and assistance by the Contractor, *at no additional cost,* as is required to make *a* complete and detailed inspection. *If requested at any time by the Owner, Designer or OAR, the Contractor shall furnish satisfactory evidence as to the kind and quality of material and equipment provided in the Work.*

The Contractor shall be responsible for coordinating and scheduling all permitting agencies' tests and inspections. All required certificates of inspection, use, occupancy and completion shall be delivered to the Owner by the Contractor in sufficient time for occupancy of the Project in accordance with the schedule for the Work. All costs incurred in connection with obtaining any permit, license, test or inspection, including any required overtime in connection therewith, shall be included within the Total Contract Price.

If any of the Work is required to be inspected or approved by the Contract Documents or by any laws, ordinances, rules, regulations or orders of public authorities, the Contractor shall cause such inspection or approval to be performed. No test, inspection or examination performed or failed to be performed by the Owner, shall be a waiver of the enforcement of any of the Contractor's obligations.

For the purpose of determining whether the Work is acceptable (as opposed to the Contractor's quality control activities for which the Contractor is solely responsible) tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction shall be performed at appropriate times. The Contractor shall be responsible for coordinating and scheduling all permitting agencies' tests and inspections described GP-50. The Owner or OAR may make arrangements for any tests, examinations and inspections with such testing laboratories or entities and, except as provided in the GPs'. The Owner shall bear the costs of such tests, examinations and inspections that the Owner so arranges. The Contractor shall give the OAR timely notice of when each portion of the Work shall be ready and available for tests, examinations and inspections. All materials and each part or detail of the Work shall be subject to inspection by the OAR. The OAR shall be allowed access to all parts of the

Work and shall be furnished with such information and assistance by the Contractor, at no additional cost, as is required to make a complete and detailed inspection. If requested at any time by the Owner or OAR, the Contractor shall furnish satisfactory evidence as to the kind and quality of material and equipment provided in the Work.

Any Work done or materials used without supervision or inspection by an authorized representative of the Owner may be ordered removed and replaced at the Contractor's expense unless the OAR failed to inspect after having been given reasonable notice in writing that the Work was to be performed.

Should the Work include relocation, adjustment, or any other modification to existing facilities, not the property of the Owner, authorized representatives of the owners of such facilities shall have the right to inspect such Work. Such inspection shall in no sense make any facility owner a party to the Contract, and shall in no way interfere with the rights of the parties to this Contract.

In the event the testing, examination and inspection, or approval procedure performed under the GPs' reveal that the Work fails to meet the requirements of the Contract Documents, the Contractor shall bear all costs arising from the failure, including, but not limited to, the costs to correct the Work and the costs of tests, examinations, inspections and services performed by the OAR, Designer and Owner in connection with such tests, examinations, inspections, or approval procedures necessary to establish that the Contractor's work conforms with the requirements of the Contract Documents.

Tests, inspections or approval procedures conducted pursuant to the Contract Documents shall be performed to avoid unreasonable delay in the Work.

The Contractor shall give the OAR timely notice of when each portion of the Work shall be ready and available for tests, examinations and inspections. The Contractor shall be responsible for inspection or examination of portions of Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work. The Contractor shall keep full detailed written records of all inspection or examination efforts. These written records shall include dates, subject matter, persons present, results of inspections or examinations and shall be made available to the OAR or Owner, if requested.

Whenever the OAR considers it necessary or advisable, the OAR may require additional inspection, examination or testing of the Work, regardless of the stage of completion or delivery of the Work. However, neither this authority of the OAR nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the OAR to the Contractor, Subcontractors, material and equipment Suppliers, their agents or employees or other persons performing portions of the Work.

The OAR may make arrangements for any additional tests, examinations and inspections. The Owner shall bear the costs of such additional tests, examinations and inspections that the OAR so arranges provided, however, in the event the additional testing, examination and inspection, or approval procedure performed reveal that the Work fails to meet the requirements of the Contract, the Contractor shall bear all costs arising from the failure, including, but not limited to, the costs of tests, examinations, inspections and services performed by the OAR, Designer and Owner in connection with such tests, examinations, inspections, or approval procedures deemed necessary by the OAR.

All tests, inspections or approval procedures shall be performed to avoid unreasonable delay in the Work.

If the ~~RPR~~ *OAR* requests it, the Contractor, at any time before acceptance of the *W*ork, shall remove or uncover such portions of the finished *W*ork as may be directed. After examination, the Contractor shall restore said portions of the *W*ork to the standard required by the specifications. Should the *W*ork thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or

making good of the parts removed will be paid for as extra work; but should the *W*ork so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Provide advance written notice to the *OAR* ~~RPR~~ of work the Contractor plans to perform each week and each day. Any *W*ork done or materials used without written notice and allowing opportunity for inspection by the ~~RPR~~*OAR* may be ordered removed and replaced at the Contractor's expense.

Should the Contract *W*ork include relocation, adjustment, or any other modification to existing facilities, not the property of the (Contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such *W*ork. Such inspection shall in no sense make any facility owner a party to the Contract, and shall in no way interfere with the rights of the parties to this Contract.

50-~~10~~*15* REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK.
All work that does not conform to the requirements of the C~~c~~ontract, P~~p~~lans and S~~s~~pecifications will be considered unacceptable, unless otherwise determined acceptable by the ~~RPR~~ *OAR* as provided in paragraph 50-0~~2~~*4*, CONFORMITY WITH PLANS AND SPECIFICATIONS.

The Owner or OAR is authorized to reject Work which does not conform to the Contract. Unacceptable Work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the Work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of Section 70, paragraph 70-14, CONTRACTOR'S RESPONSIBILITY FOR WORK.

No ~~removal~~ work ~~made under provision of this subsection~~ shall be done without lines and grades having been established by the ~~RPR~~ *Designer*. Work done contrary to the instructions of the ~~RPR~~ *OAR*, work done beyond the lines shown on the plans or as established by the ~~RPR~~, *OAR*, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the ~~RPR~~ *OAR* made under the provisions of this subsection, the ~~RPR~~ *OAR* will have authority to cause unacceptable work to be remedied or removed and replaced; and unauthorized work to be removed and to recover the resulting costs ~~as a liquidated damage~~ *will be assessed* against the Contractor.

50-16 CORRECTION OF WORK
The Contractor shall promptly correct Work rejected by the OAR, Owner or any governmental authority that fails to conform to the requirements of the Contract, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected Work, including additional testing and inspections and compensation for the OAR's and Designer's services and expenses incurred by the Owner.

If, within one year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties or by terms of an applicable special warranty required by the Contract Documents, any of the work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall, at its cost, correct it promptly after receipt of written notice from the Owner or OAR to do so unless the Owner has previously given the Contractor a written acceptance of that specific condition. This period of one year shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the Final

Completion of the Work. The obligations under this paragraph shall survive acceptance of the Work under the Contract and termination of the Contract. Even after the expiration of the one-year period, the Contractor shall cooperate with the Owner to resolve any issues that may arise with product warranties provided under this Contract.

The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract and are neither corrected by the Contractor nor accepted by the Owner.

If the Contractor does not proceed with correction of such nonconforming Work within a reasonable time fixed by written notice from the OAR, the Owner may correct or remove such nonconforming Work and all costs for such corrections or removals shall be assessed against the Contractor.

The Contractor shall bear the cost of correcting destroyed or damaged Work, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's performing correction or removal of Work which is not in accordance with the requirements of the Contract.

Nothing contained in this subsection shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract. Establishment of the time period of one year as described above relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability and damages with respect to the Contractor's obligations other than specifically to correct the Work. Nor shall anything contained in this subsection be construed to limit any other remedies available to the Owner under the Contract or Florida law.

50-17 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced in an equitable manner through a Contract Modification as determined by the OAR whether or not final payment has been made.

50-18 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents or fails to carry out orders given, fails to carry out Work in accordance with the Contract Documents, or fails to perform any or all provisions of the Contract within seven (7) days from the date of the OAR's written notice to the Contractor describing such failure, the Owner may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated. The right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. This right shall be in addition to, and not in restriction of, the Owner's other rights arising from the Contract Documents or law.

The Contractor shall not be entitled to receive any increase in the Contract Time or the Total Contract Price for work stopped or suspended by the Owner under GP-50 or for suspensions under GP-50 which are either: (1) made at the request of the Contractor for its own convenience; (2) attributable to circumstances caused by the Contractor or those for which the Contractor is responsible; (3) attributable to circumstances which reasonably could have been anticipated or avoided by the Contractor; (4) attributable to inclement

weather conditions usually experienced at the project site during the relevant time period (as defined in GP-40 attributable to circumstances otherwise anticipated in the Contract Documents.

50-19 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, commence and continue to carry out the Work or any portion thereof. In such case, an appropriate Change Order or Construction Change Directive shall be issued deducting from payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation for the OAR's and Designer's additional services and for all other expenses made necessary by such default, neglect or failure and all damages, costs, expenses or losses caused by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts owed to the Owner, the Contractor shall pay the difference to the Owner within thirty days after receiving a demand for payment pursuant to a Contract Modification. The right of the Owner to carry out the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

The Owner may carry out the Work, in whole or in part, for such period of time as it may deem necessary in its sole discretion, due to abnormal inclement weather, or any other circumstances which, in the Owner's discretion, requires the Owner to immediately commence additional, substitute, or corrective Work. The Owner shall endeavor to give reasonably prompt notice under the circumstances (whether written or oral) to the Contractor of its intention to carry out the Work except in cases of emergencies, in which case reasonably prompt notice under the circumstances after the fact is permitted. If the Work performed under this Section arises out of or relates to default, neglect, errors, or other causes attributable to Contractor, then an appropriate Contract Modification shall be issued deducting from payment then or thereafter due to the Contractor the cost of such Work, including compensation for the OAR's and Designer's additional services and for all other expenses made necessary by the Contractor's default, neglect or failure, and all damages, costs, expenses or losses caused by the Contractor's default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts owed to the Owner, the Contractor shall pay the difference to the Owner within thirty (30) days after receiving a demand for payment pursuant to a Contract Modification. The right of the Owner to carry out the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

50-~~11~~20 LOAD RESTRICTIONS.

The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor, at their own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel.

50-~~12~~*21* MAINTENANCE DURING CONSTRUCTION.
The Contractor shall maintain the W~~w~~ork during construction and until the W~~w~~ork is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the *W*~~w~~ork is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the ~~project~~ *Work* is accepted shall be included in the unit prices bid on the various C~~c~~ontract items, and the Contractor will not be paid an additional amount for such work.

50-~~13~~*22* FAILURE TO MAINTAIN THE WORK.
Should the Contractor at any time fail to maintain the work as provided in paragraph 50-22, MAINTENANCE DURING CONSTRUCTION, the ~~RPR~~ *OAR* shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the ~~RPR's~~ *OAR's* notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be *assessed* ~~recovered as a liquidated damage~~ against the Contractor.

50-~~14~~*23* PARTIAL ACCEPTANCE.
If at any time during the execution of the *Project* the Contractor substantially completes a usable unit or portion of the *W*ork, the occupancy of which will benefit the Owner, the Contractor may request the *Owner* to make final inspection of that unit. If the *Owner* finds upon inspection that the unit has been satisfactorily completed in compliance with the ~~c~~*Contract*, the *Owner* may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the Contract.

The Owner may occupy or use any completed or partially completed portion of the Work at any stage and, if the Owner chooses such partial occupancy, the Contractor and Owner shall designate by an agreement the conditions of such partial occupancy, provided such occupancy or use is consented to by the Owner's insurer as required under GP-70 and authorized by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is Substantially Complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, operations, cleaning and housekeeping, heating and cooling, utilities, damage to the Work, and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. Even if an agreement is reached as to partial occupancy or use, the parties shall still comply with the requirements for Substantial Completion under the Contract Documents for that portion of the Work. Consent of the Contractor to partial occupancy or use by the Owner shall not be unreasonably withheld.

Immediately prior to such partial occupancy or use, the Owner, OAR, Contractor and Designer shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not

constitute acceptance of Work which is not in conformance with the requirements of the Contract Documents.

50-24 SUBSTANTIAL COMPLETION

The Substantial Completion date is the point at which, as certified in writing by the Contractor and agreed to by the Owner, OAR and Designer, the Work is at the level of completion and in conformance with the requirements of the Contract Documents, where:

a. *The Certificate of Occupancy or Completion has been issued by the City of Orlando, if applicable, and all required sign-off by the Authorities Having Jurisdiction (AHJ) and other public regulatory authorities has been given. The date of the Certificate of Occupancy or Completion does not establish the date of Substantial Completion.*

b. *The Owner has received all required warranties (draft form), Operation & Maintenance Manuals, As-built drawings and other documentation required by the Contract Documents; and*

c. *The Owner will have complete use or occupancy and may use, operate, and maintain the Work in all respects, for its intended purpose and without undue interference by the Contractor's Final Completion efforts.*

When the Contractor considers that the Work or designated portion thereof is close to being Substantially Complete, the Contractor shall prepare and submit to the OAR a comprehensive punch list of items to be completed or corrected and the schedule to complete each item. The punch list shall be transmitted to the OAR a minimum of five (5) business days prior to Contractor's anticipated date of achieving Substantial Completion. The Contractor shall proceed promptly to complete and correct items on the list. Failure to include an item on the punch list does not alter the responsibility of the Contractor to complete all Work in accordance with the requirements of the Contract Documents.

Upon notice to the OAR by the Contractor that its punch list has been completed and the Work is ready for the Substantial Completion Inspection, the OAR will conduct a preliminary inspection to determine whether the Work or designated portion thereof is Substantially Complete. If the OAR's preliminary inspection discloses any item that is not in accordance with the requirements of the Contract Documents, whether or not included on the Contractor's punch list, the OAR shall so notify the Contractor and the Contractor shall add the items to its punch list. The Contractor shall proceed to complete or correct every item on the revised punch list and request re-inspection from the OAR. If the OAR determines that the Work is ready, the Substantial Completion Inspection will be scheduled at a minimum of three (3) business days after the OAR's preliminary inspection.

The OAR, the Designer and others, during the Substantial Completion Inspection, will prepare the Owner's preliminary Substantial Completion punch list of all remaining work to be completed or corrected. The OAR shall combine the items from all parties into one Substantial Completion punch list. Failure to include an item on the Substantial Completion punch list does not alter the responsibility of the Contractor to complete all Work in accordance with the requirements of the Contract Documents. The OAR shall distribute the Substantial Completion punch list to the Contractor within a maximum of fifteen (15) business days after the date of Substantial Completion. All items on the substantial completion punch list must be completed prior to the date of Final Completion.

When the Work or designated portion thereof is Substantially Complete, the OAR shall prepare a Certificate of Substantial Completion signed by the OAR and Designer which shall establish the date of Substantial Completion, shall establish the responsibilities of the Owner and Contractor for security, maintenance, operations, cleaning and housekeeping, heating and cooling, utilities, damage to the Work, and insurance, and shall fix the time within which the Contractor shall finish all items on the combined punch list

accompanying the Certificate. The Certificate of Substantial Completion shall be submitted to the Contractor for appropriate acceptance and signature. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Contract Documents.

50-~~15~~25 FINAL ACCEPTANCE.

Upon due notice from the Contractor of presumptive completion of the entire project *and upon receipt of a final application for payment,* the ~~RPR~~ *Designer, OAR* and Owner will make an inspection. *Final completion shall be achieved by the Contractor within the timeframe set forth in GP-20, unless otherwise required in the Contract.* If all construction provided for and contemplated by the Contract is found to be complete in accordance with the Contract, plans, and specifications, *and all close-out documentation has been delivered to the OAR,* such inspection shall constitute the final inspection. The ~~RPR~~ *OAR* shall notify the Contractor in writing of final acceptance as of the date of the final inspection *and the OAR shall execute a final Certification for Payment in the form acceptable to the Owner.*

If, however, the inspection discloses any Work, in whole or in part, as being unsatisfactory, the ~~RPR~~ *OAR* will notify the Contractor and the Contractor shall correct the unsatisfactory work. Upon correction of the Work, another inspection will be made which shall constitute the final inspection, provided the Work has been satisfactorily completed. In such event, the ~~RPR~~ *OAR* will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

Refer to GP-90-08, Acceptance and Final Payment for additional requirements for final acceptance.

50-~~16~~26 CLAIMS FOR ADJUSTMENT AND DISPUTES.

If for any reason the Contractor deems that additional compensation is due for Work or materials not clearly provided for in the Contract, Plans, or Specifications or previously authorized as extra work, the Contractor shall notify the ~~RPR~~ *OAR* in writing of its intention to claim such additional compensation beforeit begins the work on whichit bases the Claim. If such notification is not given or the ~~RPR~~ *OAR* is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any Claim for such additional compensation. Such notice by the Contractor and the fact that the ~~RPR~~ *OAR* has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the Claim. ~~When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the RPR who will present it to the Owner for consideration in accordance with local laws or ordinances.~~

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

~~**50-17 Value Engineering Cost Proposal.**~~

50-27 PROCEDURES FOR SUBMITTING CLAIMS AND DISPUTES

1. Claims and Disputes

.1 Time Limits and Claim Substantiation. All Claims by the Contractor must be made within fourteen (14) days after occurrence of the event giving rise to such Claim or within fourteen (14) days after the Contractor first recognizes the condition giving rise to the Claim, whichever is later. Claims must be initiated by written notice to the Owner, provided in accordance with this Contract, and

contain a thorough description of the basis of the Claim, with a copy served to the Owner and the OAR. RCOs, Daily reports, updated monthly schedules, Requests for Information, Applications for Payments, meetings and meeting minutes, and other administrative documents required by the contract do not constitute written notice of a Claim.

.2 *The Contractor shall be responsible for substantiating and quantifying its Claim within thirty (30) days of the written notice by submitting an itemized, detailed cost breakdown sufficient to analyze the value and impact of the Claim, stating applicable cost and time impacts in accordance with the requirements of GP-40. Failure to comply with the time requirements for providing written notice and substantiation of Claims shall result in a waiver of the applicable Claim. Under no circumstances shall the Contractor be entitled to any indirect, incidental, special, or consequential damages in any proceeding arising out of or relating to this Contract or the breach thereof.*

.3 *Continuing Contract Performance. Pending final resolution of a Claim, including, but not limited to during the process set forth in Paragraphs 1.4 and 1.5, the Contractor shall proceed diligently with performance of the Work. Neither the Owner's payment on an Application for Payment pending final resolution of a Claim nor the Owner's agreement to relief in connection with a Claim, RCO, or otherwise shall be deemed to expressly, impliedly, by course of conduct or otherwise, waive the requirements for notice and substantiation of Claims.*

.4 *By making final payment, the Owner does not waive any of its rights in law or under the Contract arising from: (a) liens, claims, security interests or encumbrances arising out of the Contract and unknown or unsettled at the time final payment is made; (b) latent defects; (c) failure of the Work to comply with the Contract Documents; (d) terms of special warranties required by the Contract Documents; or (e) any claim for overpayment, including, but not limited to, those resulting directly or indirectly from any erroneous measurement, estimate or quantity.*

.5 *Claims for Concealed, Unforeseen or Unknown Conditions. If conditions are encountered at the site that are (1) concealed physical conditions which differ materially from those indicated in the Contract or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract, then the Contractor shall give written notice to the OAR promptly before conditions are disturbed and in no event later than seven (7) days after first observance of the conditions. This notice shall include a written description of the concealed or unknown condition and the Contractor's proposed method to resolve the concealed or unknown condition. If the OAR determines that the conditions at the site are not materially different from those indicated in the Contract and that no change in the terms of the Contract is justified, the OAR shall so notify the Owner and Contractor in writing. The Contractor shall notify the OAR of any opposition to the OAR's determination within seven (7) days after the OAR has given notice of its determination. Substantiation and quantification of any Claims related to concealed or unknown conditions must be provided within thirty (30) days of the date that the Contractor's Claim notice is received by the OAR. If such concealed or unknown site conditions are encountered, and if the critical path is directly impacted as a result, the Contractor shall be entitled to an adjustment in the Total Contract Time for the delay caused by the correction of concealed or unknown conditions, subject to the requirements of GP-40. If such concealed or unknown site conditions are encountered, requests for compensation for the reasonable direct costs that are caused solely by the delay are subject to the requirements of GP-40. If the concealed or unknown condition causes a decrease in the cost of performing the Work, the Owner shall be entitled to deduct the decreased cost from the Total Contract Price.*

.6 *Injury or Damage to Person or Property. If Contractor suffers injury or damage to person or property because of an act or omission of the Owner, of Owner'semployees or agents, or of others for whose acts the Owner is legally liable, written notice of such injury or damage, whether or not insured,*

shall be given to the Owner in accordance with this Contract no later than fourteen (14) days after first observance. The notice shall provide sufficient detail to enable the Owner to investigate the matter.

2. MANDATORY PRE-SUIT MEDIATION

All Claims, disputes, or other matters in question arising out of or relating to the Contract, shall be subject to mandatory pre-suit mediation under the auspices of a mediator to be selected by the parties. Mediation must occur before a lawsuit is filed. Discovery prior to the scheduled mediation shall be limited to one (1) request for production of documents and two (2) depositions per party not exceeding 8 hours total time per deposition. Each party shall equally bear the costs of mediation and shall be solely responsible for its own attorneys' fees and other legal costs prior to and during the mediation process. In the event the case does not settle at mediation, the parties may re-depose either or both witnesses on non-repetitive matters.

3. CERTIFICATION OF SUBCONTRACTOR CLAIM

For any Claim made by the Contractor against the Owner, the basis of which includes a claim by a Subcontractor, or any other person or entity under the Contractor's control, for acts or omissions allegedly attributable to the Owner, the Contractor must certify by affidavit that it has carefully examined each Subcontractor's claim and has verified the truth and accuracy of each claim. Such certification under oath must be made by the Contractor prior to the submission of any Subcontractor claim to the Owner and shall constitute an express condition precedent to the Contractor having a cause of action against the Owner that includes a Subcontractor's claim. A copy of such certification shall be provided to the Owner contemporaneous with the submission of any Subcontractor claim to the Owner. The Owner will not consider any Claim that has not been properly certified by the Contractor nor is the Contractor entitled to relief by the Owner unless the certification contemplated by this Section has been properly furnished to the Owner.

4. RESOLUTION OF DISPUTES

The parties agree that all legal proceedings that relate in any way to this Contract shall be brought only in the Circuit Court of the Ninth Judicial Circuit in and for Orange County, Florida.

The Contractor shall, within fifteen (15) business days from delivery of notice from the Owner or OAR, produce for examination by the Owner, OAR or an authorized representative of either of them, all of the Contractor's records related to the Work or under the Contract, including, but not limited to, books of account, bills, invoices, payrolls, Subcontracts, Subcontractor payment requests, time sheets/cards, progress records, daily logs, daily reports, cost accounting records, correspondence, and any other document or record, regarding all of the Contractor's acts and transactions in connection with or relating to or arising by reason of the Contract, and provide appropriate personnel familiar with such records to explain such records and answer questions regarding any Claims made under this Contract. The Contractor's failure to furnish the requested information or appear for examination shall result in the Contractor's waiver and release of all Claims arising out of, relating to, or by reason of this Contract, except for the sums certified by the OAR to be due under the provisions of the Contract. In addition to the foregoing, to the extent any Claim by the Contractor includes any claims by Subcontractors, arising under or by reason of this Contract, the Owner shall also have the right through its designees, upon written notice, to require the Subcontractor to produce the above described records related to the Work in connection with this Contract in the Subcontractor's possession and to submit itself and persons in its employ to similarly explain its records and answer questions, within fifteen (15) business days from delivery of written notice from the Owner to the Contractor requesting same. The Contractor shall ensure that the Subcontractor timely complies with this provision.

It is further stipulated and agreed that no person or entity has power to waive any of the foregoing provisions of this subparagraph 4, and that in any action against the Owner to recover on any claim or any sum in excess of the sums certified by the OAR to be due under or by reason of this Contract, the Contractor must allege in its complaint, and prove at trial, compliance with the provisions of this subparagraph 4.

50-28 MULTIPLE CONTRACTS WITH CONTRACTOR SETOFF

The Owner and Contractor may enter into more than one contract for the performance of labor or the provision of materials, equipment or supplies. The Owner shall be entitled to setoff any claims against the Contractor which it may have pursuant to the terms of the Contract against any sums due or claimed to be due to the Contractor from the Owner under any other contract or agreement between the Owner and Contractor.

50-29 OWNER'S AUDIT RIGHTS

The Contractor's records, including both electronic and traditional paper files, shall be open to inspection and subject to audit or reproduction by the Owner or its authorized representative to the extent necessary to adequately permit examination, evaluation and verification of the Cost of the Work, and any invoices, Change Orders, Construction Change Directives, Field Change Orders, Force Account payments or Claims submitted by the Contractor or any of its Subcontractors or Suppliers pursuant to the execution of the Contract. The Contractor's records include but are not limited to the following: accounting records (including monthly job cost detail, detailed job cost history, monthly labor distribution detail, total job labor distribution, daily foreman reports, daily superintendent reports, detailed subcontract status reports, executed subcontracts, subcontract change orders and all documentation supporting all job costs, such as subcontractor payment applications, vendor invoices, internal cost charges), written policies and procedures, time sheets, payroll registers, payroll records, cancelled payroll checks, subcontract files (including proposals of successful and unsuccessful bidders, bid recaps and negotiation notes), original estimates, estimating work sheets, correspondence, change order files (including documentation covering negotiated settlements), backcharge logs and supporting documentation, the general ledger for the project along with all supporting data, information detailing cash and trade discounts and rebates earned, , documents described in GP-40 and any other data or evidence deemed necessary by the Owner or that may have a bearing on matters of interest to the Owner (all foregoing hereinafter referred to as "Contractor's Records"). The Contractor's records described above shall be maintained and made available to the Owner or its authorized representative for not less than ten (10) years after date of final payment or longer if required by law. Owner or its authorized representative may (without limitation) conduct verifications such as counting employees on the Project witnessing the distribution of payroll, verifying information and amounts through interviews and written confirmations with Contractor employees, field and agency labor, Subcontractors, and vendors.

Audits may require inspection, scanning and copying from time to time and at reasonable times and places of any and all information, materials and data of every kind and character, including without limitation, the Contractor's Records listed in the preceding paragraph, books, papers, documents, subscriptions, recordings, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, daily diaries, superintendent reports, drawings, receipts, vouchers and memoranda, and any and all other agreements, sources of information and matters that may in the Owner's judgment have any bearing on or pertain to any matters, rights, duties or obligations under or covered by any Contract Document. Such Contractor's Records subject to audit shall also include, but not be limited to, those Contractor's Records necessary to evaluate and verify direct and indirect costs (including overhead allocations), as they may apply to costs associated with this Contract.

The Owner or its authorized representative shall be afforded access to all of the Contractor's Records, and shall be allowed to interview any and all of the Contractor's current or former employees, pursuant to the

provisions of this article throughout the term of this Contract and for a period of ten years after final payment.

The Contractor shall require all Subcontractors and Suppliers to comply with the provisions of this article by insertion of the requirements hereof in a written contract agreement between the Contractor and its Subcontractors and Suppliers. Such requirements will also apply to Sub-subcontractors and Subcontractors' Suppliers. The Contractor will cooperate fully and will cause all of the Contractor's Subcontractors (including those entering into lump sum Subcontracts) to cooperate fully in furnishing or in making available to Owner from time to time whenever requested in an expeditious manner any and all such information, materials and data.

The Owner, OAR and Designer or their authorized representative shall have access to the Contractor's facilities, shall have access to all necessary Contractors' Records, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with this article.

If an audit inspection or examination in accordance with this article, discloses overcharges (of any nature) by the Contractor to the Owner in excess of one percent (1%) of the total contract billings, the actual cost of the Owner's audit shall be reimbursed to the Owner by the Contractor. Any adjustments or payments which must be made as a result of any such audit or inspection of the Contractor's Records shall be made within a reasonable amount of time (not to exceed 90 days) from presentation of the Owner's finding to the Contractor. Any overpayments to the Contractor by the Owner shall include the legal rate of interest, from the date such additional amounts were overpaid by the Owner.

END OF SECTION 50

SECTION 60 CONTROL OF MATERIALS

60-01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS.

The materials used on the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish documentation to the ~~RPR~~ *OAR* as to the origin, composition, and manufacture of all materials to be used in the Work. Documentation shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the ~~RPR's~~ *OAR's* option, materials may be approved at the source of supply before delivery. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that meets the requirements of the specifications; and is listed in AC 150/5345-53, AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM AND ADDENDUM, that is in effect on the date of *A*dvertisement.

60-02 SAMPLES, TESTS, AND CITED SPECIFICATIONS.

All materials used in the work shall be inspected, tested, and approved by the ~~RPR~~ *OAR* before incorporation in the work unless otherwise designated. Any work in which untested materials are used without approval or written permission of the ~~RPR~~ *OAR* shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the ~~RPR,~~ *OAR*, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests will be made by *the OAR* and at the expense of the Owner in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), federal specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of Advertisement for Bids.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the ~~RPR~~ *OAR*. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the ~~RPR~~ *OAR*.

A copy of all Contractor QC test data shall be provided to the *OAR* daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the *OAR* showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

All test data from the Contractor shall be furnished in the Close-out Manuals, paper format and electronic format on an optical disk.

60-03 CERTIFICATION OF COMPLIANCE/ANALYSIS (COC/COA) .

The ~~RPR~~ *OAR* may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's COC stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified. The COA is the manufacturer's COC and includes all applicable test results.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the ~~RPR~~ *OAR*.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "or equal," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

a. Conformance to the specified performance, testing, quality or dimensional requirements; and,

b. Suitability of the material or assembly for the use intended in the contract work.

The ~~RPR~~ Designer shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The ~~RPR~~ *Owner* reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 PLANT INSPECTION.

The ~~RPR~~ *OAR* or their authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the ~~RPR~~ *OAR* conduct plant inspections, the following conditions shall exist::

a. The ~~RPR~~ *OAR* shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.

b. The ~~RPR~~ OAR shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.

c. If required by the ~~RPR~~ *OAR*, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The *OAR* shall have the right to reject only material which, when retested, does not meet the requirements of the Contract, plans, or specifications.

60-05 *OWNER'S AUTHORIZED REPRESENTATIVE (OAR)* ~~Engineer/Resident Project Representative~~ FIELD OFFICE.

When required by the Contract, the Contractor shall provide dedicated space for the use of the engineer, *OAR*, and inspectors, as a field office for the duration of the project. This space shall be located conveniently near the construction and shall be separate from any space used by the Contractor. The Contractor shall furnish water, sanitary facilities, heat, air conditioning, and electricity.

60-06 STORAGE OF MATERIALS.

Materials shall be so stored as to assure the preservation of their quality and fitness for the ~~w~~*Work*. Stored materials, even though approved before storage, may again be inspected prior to their use in the ~~w~~*Work*. Stored materials shall be located so as to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the ~~RPR~~ *OAR*. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans, and/or CSPP, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the ~~RPR~~ *OAR*. Private property shall not be used for storage purposes without written permission of the ~~o~~*Owner* or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the ~~RPR~~ *OAR* a copy of the property owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at ~~their~~ *Contractor's* expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

The Contractor shall be responsible for all loss or damage to the Contractor's equipment and tools on the job site including, but not limited to, loss or damage from theft, malicious mischief or vandalism. The Contractor shall be responsible for all loss or damage of stored materials or equipment located on the Owner's property until the Work reaches Final Completion, including but not limited to all loss or damage arising from theft, malicious mischief or vandalism.

At the Owner's sole discretion, payment may be made for the cost of materials and equipment delivered and suitably stored at a location approved by Owner, in its sole discretion, for subsequent incorporation in the Work. . Payment for stored materials will be limited to the actual cost of the equipment or material as documented by invoices, excluding all other costs such as shipping, handling, and storage. In order for stored material to qualify for early payment hereunder, the value of the materials must exceed $10,000 and the stored materials must not be scheduled to be incorporated into the Work within sixty (60) days, unless otherwise allowed by Owner. Payment for such stored items shall not relieve the Contractor of its obligations to furnish and install the items in accordance with the Contract Documents and to adequately protect, insure, secure, and maintain such stored items until the Work reaches Final Completion. Payment for such stored items shall be conditioned upon the following information and documentation being obtained by Contractor and provided to Owner:

- *.1 Inventory schedule detailing the specific type of stored materials for which payment is requested, including but not limited to, quantities, types and sizes;*
- *.2 Invoices evidencing the costs of such stored materials, attached as back-up documentation to the Application for Payment under which payment for stored materials is sought;*
- *.3 A bill of sale, invoice or other documentation evidencing that the Owner has received the stored items free and clear of all claims and liens. This evidence shall be submitted to the Owner in Contractor's next pay application; Failure to comply with this requirement may result in the Owner withholding payment until the evidence is furnished;*
- *.4 A consent of surety for the Owner's payment for such stored items;*

.5 *A certificate of insurance evidencing that stored materials not located on the Owner's property are insured for the full replacement value of the stored materials for which payment is requested. Failure of the Contractor to obtain and maintain insurance coverages required herein shall give rise to a breach of this Contract, thereby allowing Owner all recourse permitted by law, including recovery under the Payment and Performance Bonds posted for this Project.*

Contractor agrees to separately mark and identify the stored materials with the Project name and name of the Contractor. All such stored materials shall be made available for Owner's periodic inspections. Contractor shall be responsible for all loss or damage to such stored materials until the Work reaches Final Completion, including but not limited to all loss or damage arising from theft, malicious mischief or vandalism. Contractor assumes all risk of transit with respect to such stored materials.

If so requested by the Owner, the Contractor shall submit, within 30 days after the date of commencement of the Work and thereafter as the Owner requires, material delivery schedules for each category or subcontract for which application for payment for stored materials will be made, which schedules shall include items, quantities, value or unit prices with extensions and the month in which Application for Payment with respect thereto is expected to occur. Schedules shall be updated on a monthly basis and submitted as an attachment to the Contractor's Application for Payment. The Owner has no obligation to pay the Contractor if the updated monthly schedule is not provided.

The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment on such Application for Payment by the Owner to the Contractor, and that the Contractor shall retain all obligations under this Contract related to the Work, including but not limited to responsibility to adequately insure, maintain, secure and protect all Work and all materials and equipment related to the Work until the Work reaches Final Completion, including, but not limited to, adequately insuring, securing and protecting all such Work and materials and equipment related to the Work from weather damage. The Contractor further warrants that upon submission of an Application for Payment, all Work for which Certifications for Payment have been previously executed or all Work for which payments have been received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material Suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work.

60-07 UNACCEPTABLE MATERIALS.

Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the ~~RPR~~ *OAR*.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the ~~RPR~~ *OAR* has approved its used in the work.

60-08 OWNER FURNISHED MATERIALS.

The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

END OF SECTION 60

SECTION 70 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

70-01 LAWS TO BE OBSERVED.

The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all their officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

70-02 FAA REQUIRED PROVISIONS

*.1 **Agreements with the United States and State of Florida**. This Contract shall be subject to all restrictions of record affecting the Airport and the use thereof, all Federal and state laws and regulations affecting the same, and shall be subject and subordinate to the provisions of any existing agreement between the Owner and the United States of America or the State of Florida, their boards, members, agencies or commissions and to future agreements between the foregoing relative to the operation or maintenance of the Airport, the execution of which may be required as a condition precedent to the expenditure of Federal or state funds for the development of the Airport, or as a condition precedent to the use of the Airport, or any part thereof, by the Contractor, the Owner or otherwise. All provisions hereof shall be subordinate to the right of the United States of America to terminate the right of the Contractor, the Owner, or others, to occupy or to use the Airport, or any part thereof, during the time of war or national emergency.*

*.2 **Fair Prices**. If the Contractor shall furnish any services to the public at the Airport, it shall furnish said services on a fair, equal and not unjustly discriminatory basis to all users thereof and shall charge fair, reasonable and not unjustly discriminatory prices for each unit of service, provided that the Contractor shall be allowed to make reasonable and non-discriminatory discounts or rebates or other similar types of price reductions to volume purchasers, if any.*

*.3 **Texting When Driving.** In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 "Text Messaging While Driving" (12/30/2009), the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant. In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding $3,500 and involve driving a motor vehicle in performance of work activities associated with the project.*

*.4 **Energy Conservation Requirements.** Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201et seq). This provision must be included in all lower tier contracts.*

*.5 **Interfering Structures and Electronics.** The Contractor will not erect or permit the erection on the Airport property of any permanent or temporary structure or facility which would interfere materially with the use, operation or future development of the Airport, or permit the generation of electronic emissions that would interfere with communications and navigation by aircraft using the Airport.*

.6 ***Landing Area and Air Navigation Facility.*** *This Contract confers no right upon the Contractor to use any landing area or air navigation facility at the Airport, and hence, nothing contained in this Contract shall be construed to grant, or to authorize the granting of, an exclusive right for the use of any such landing area or air navigation facility in violation of Section 308 of the Federal Aviation Act of 1958.*

.7 ***TSA Regulations.*** *The Contractor shall comply with all applicable Transportation Security Administration (TSA) regulations concerning Airport security.*

.8 ***Pollution.*** *The Contractor shall not, in its operations hereunder, generate any odors, fumes, smoke, noise, glare, vibration, electronic emissions, soot, dust or atmospheric pollution, sewage, industrial or other wastes, in violation of any applicable law, regulation or procedure of any Federal, state, county or city authority having jurisdiction with respect to such matters.*

.9 ***Airport Operations.*** *The Owner reserves unto itself, its successors and assigns, for the use and benefit of the public, a right of flight for the passage of aircraft in the airspace above the surface of the Airport, together with the right to cause in said airspace such noise as may be inherent in the operation of aircraft, now known or hereafter used, for navigation or flight in the said airspace, and for use of said airspace for landing on, taking off from or operating on the Airport.*

.10 ***Height Restrictions.*** *The Contractor expressly agrees for itself, its successors and assigns, to restrict the height of structures, objects of natural growth and other obstructions on the Airport to such a height so as to comply with Federal Aviation Regulations, Part 77.*

.11 ***Construction Lighting.*** *The Contractor agrees for itself and its Subcontractors to require any lights on the Airport to be constructed, focused or arranged in a manner that will prevent the lights from casting beams in an upward direction so as to interfere with the vision of pilots in aircraft.*

.12 ***Undue Risk and Interference.*** *If the FAA determines that any right or claim of right in or to the property herein creates an undue risk or interference with the operation of the Airport or the performance of or compliance with any covenants and conditions to which the use of the Airport is subject, said right or claim shall be extinguished or modified in a manner acceptable to the FAA.*

.13 ***Occupational Safety and Health Act of 1970.*** *All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910, with the same force and effect as if given in full text.* Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

.14 ***Procurement of Recovered Materials.*** *Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this Contract and to the extent practicable, the Contractor and subcontractors are to use of products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever: a) The Contract requires procurement of $10,000 or more of a designated item during the fiscal year; or, b) The Contractor has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year. The list of EPA-designated items is available at www.epa.gov/epawaste/conserve/tools/cpg/products/. Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is: a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;*

b) Fails to meet reasonable contract performance requirements; or c) Is only available at an unreasonable price.

.15 **Seismic Safety**. *The Contractor agrees to ensure that all work performed under this Contract, including work performed by Subcontractors, conforms to a building code standard that provides a level of seismic safety substantially equivalent to standards established by the National Earthquake Hazards Reduction Program (NEHRP). Local building codes that model their code after the current version of the International Building Code (IBC) meet the NEHRP equivalency level for seismic safety.*

.16 ***Federal Fair Labor Standards Act (Federal Minimum Wage) (29 USC § 201 et seq.)*** *All contracts and subcontracts that result from this solicitation incorporate by reference, the provisions of 29 CFR Par 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part time workers. The Contractor has full responsibility to monitor compliance to the referenced statute or regulation. The Contractor must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division. All subcontractors must comply with the FLSA.*

70-023 PERMITS, LICENSES, AND TAXES.
The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

70-034 PATENTED DEVICES, MATERIALS, AND PROCESSES.
If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall *defend against any lawsuits or claims made against the Owner and shall* indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the Work.

70-045 RESTORATION OF SURFACES DISTURBED BY OTHERS.
The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) ~~is~~ *shall be as* indicated ~~as follows~~: *on the Project Plans or described in the Contract Documents.*

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the Work without the written permission of the ~~RPR~~ *OAR.*

Should the owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the Work, the Contractor shall cooperate with such owners by arranging and performing the work in this contract so as to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the ~~RPR~~ *OAR*, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the

Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-~~05~~6 FEDERAL PARTICIPATION.
The United States Government has agreed to reimburse the Owner for some portion of the Contract costs. The Contract Work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator. No requirement of this Contract shall be construed as making the United States a party to the Contract nor will any such requirement interfere, in any way, with the rights of either party to the Contract

70-~~06~~7 SANITARY, HEALTH, AND SAFETY PROVISIONS.
The Contractor's worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.

70-~~07~~8 PUBLIC CONVENIENCE AND SAFETY.
The Contractor shall control their operations and those of their subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to their own operations and those of their own subcontractors and all suppliers in accordance with Section 40, paragraph 40-07, MAINTENANCE OF TRAFFIC, and shall limit such operations for the convenience and safety of the traveling public as specified in Section 80, paragraph 80-05, LIMITATION OF OPERATIONS.

The Contractor shall remove or control debris and rubbish resulting from its work operations at frequent intervals, and upon the order of the ~~RPR~~ *OAR* If the ~~RPR~~ *OAR* determines the existence of Contractor debris in the work site represents a hazard to airport operations and the Contractor is unable to respond in a prompt and reasonable manner, the ~~RPR~~ *OAR* reserves the right to assign the task of debris removal to a third party and ~~recover~~ *assess* the resulting costs ~~as a liquidated damage~~ against the Contractor.

70-~~08~~9 CONSTRUCTION SAFETY AND PHASING PLAN (CSPP).
The Contractor shall complete the Work in accordance with the approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction. ~~The CSPP is on sheet(s) [ ] of the project plans.~~

70-~~09~~10 USE OF EXPLOSIVES.
USE OF EXPLOSIVES IS STRICTLY PROHIBITED

70-~~10~~11 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE.
The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the ~~Engineer/RPR~~ *OAR* has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the Work, resulting from any act, omission, neglect, or misconduct in manner or method of

executing the Work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the Work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at their own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

70-~~11~~12 *INDEMNIFICATION* ~~RESPONSIBILITY FOR DAMAGE CLAIMS.~~

~~The Contractor shall indemnify and hold harmless the Engineer/RPR and the Owner and their officers, agents, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of their own contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, their own surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.~~

To the fullest extent permitted by law, Contractor shall indemnify and hold completely harmless the Owner, City of Orlando, (including, without limitation, their officers, agents, employees and all members of the governing boards and the Citizen Advisory Committees of each), as well as the OAR, State of Florida, Department of Transportation, and the officers, agents, and employees of each of them (the "Indemnified Parties") from and against any and all claims, suits, demands, judgments, losses, costs, fines and penalties (including any assessed by the FAA or TSA, and any required or recommended investigation and security training, incurred as a result of any violation of federal regulations, including the Airport Security Plan), damages, expenses, liabilities (including statutory liabilities under Workers Compensation laws) and reasonable expenses (including, but not limited to, fees for attorneys, expert witnesses, scene recreations, legal support expenses) ("Damages"), which may be incurred by or charged to Indemnified Parties, to the extent caused in whole or in part by any negligent act, omission, recklessness or intentional misconduct by the Contractor, any Subcontractor, or any of their officers, directors, partners, employees, agents, or suppliers, or anyone directly or indirectly employed by any of them or anyone for whose acts they may be liable, arising directly or indirectly from (i) the Work or Project or this Contract, (ii) work performed under warranty, or (iii) the failure of the Contractor to keep, observe or perform its responsibilities and obligations contained in or arising from this Contract.

This indemnification obligation shall apply and not be limited by any limitation on the amount or type of compensation or benefits under worker's compensation laws, disability benefits, or other employee benefits. The obligations of this paragraph shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist under law or this Contract. Nothing in this Contract shall be deemed a waiver by Owner of its sovereign immunity rights under the laws of the State of Florida, other than those specifically waived by virtue of this Contract.

The indemnification obligations of this Contract shall not be limited or reduced by Liquidated Damages that

may be assessed against the Contractor.

If the above indemnity provisions are deemed void in whole or in part under Florida law, then the following indemnification obligations shall apply to the extent such provisions are deemed void: Contractor shall indemnify and hold harmless the Owner, the State of Florida Department of Transportation, its officers and employees, from liabilities, damages, losses and costs, including but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the Contractor and persons employed or utilized by the Contractor in the performance of the Contract.

The indemnification provisions shall survive the expiration or termination of this Contract. The Owner's right to indemnification is in addition to and not in lieu of any other right, obligation, or remedy under the Contract or applicable law, including, without limitation, the Owner's ability to assess Backcharges and Liquidated Damages. The Owner may seek indemnification at any time.

70-~~12~~13 THIRD PARTY BENEFICIARY CLAUSE.
It is specifically agreed between the parties executing the Contract that it is not intended by any of the provisions of any part of the Contract to create the public or any member thereof a third party beneficiary or to authorize anyone not a party to the Contract to maintain a ~~suit for personal injuries or property damage~~ *lawsuit* pursuant to the terms or provisions of the Contract.

70-~~13~~14 OPENING SECTIONS OF THE WORK TO TRAFFIC.
If it is necessary for the Contractor to complete portions of the ~~C~~contract ~~W~~work for the beneficial occupancy of the Owner prior to completion of the entire ~~C~~contract, such "phasing" of the work shall be specified below and indicated on the approved Construction Safety and Phasing Plan (CSPP) and the project plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified.

~~Upon completion of any portion of work listed above, such portion shall be accepted by the Owner in accordance with Section 50, paragraph 50-23, PARTIAL ACCEPTANCE.~~

No portion of the Work may be opened by the Contractor for public use until ordered by the ~~Owner~~ *OAR* in writing. Should it become necessary to open a portion of the Work to public traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the ~~RPR~~ *OAR*, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the Work and shall not constitute either acceptance of the portion of the Work so opened or a waiver of any provision of the Contract. Any damage to the portion of the Work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at their expense.

The Contractor shall make their own estimate of the inherent difficulties involved in completing the Work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the ~~contract~~ Work.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP.

Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

70-~~14~~15 CONTRACTOR'S RESPONSIBILITY FOR WORK.
Until the ~~RPR's~~ *OAR's* final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-24, PARTIAL ACCEPTANCE, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at their own expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-~~15~~16 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS.
The Contractor represents that it is familiar with the Project site and has received all information it needs concerning the conditions of the Project site. The Contractor represents that it has inspected the location of the Work and has satisfied itself as to the location and condition thereof, including, without limitation, the location and condition of all structures, utilities, and surface and subsurface conditions. At no additional cost to the Owner, the Contractor shall undertake all further investigations and studies as may be necessary or useful to determine the location and condition of structures, utilities, surface and subsurface conditions.

As provided in paragraph 70-04, RESTORATION OF SURFACES DISTURBED BY OTHERS, the Contractor shall cooperate with the owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the Work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans. ~~and the owners are indicated as follows:~~

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the Ceontract, notify the Owners of all utility services or other facilities of their plan of operations. Such notification shall be in writing. ~~addressed to "The Person to Contact" as provided in this paragraph and paragraph 70-04, *Restoration of Surfaces Disturbed By Others.*~~ A copy of each notification shall be given to the ~~RPR~~ *OAR*.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner~~'s "Person to Contact"~~ no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the ~~RPR~~ *OAR*.

The Contractor's failure to give the two days' notice shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the ~~RPR~~ *OAR* and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the ~~RPR~~ *OAR* continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or their own surety.

70-~~15.1~~17 FAA FACILITIES AND CABLE RUNS.

The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the execution of the project *W*ork, shall comply with the following:

a. The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.

b. The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the airport Owner a minimum of seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages. If prosecution of the ~~project work~~ *Project W*ork requires a facility outage, the Contractor shall contact ~~the above named FAA Point-of-Contact~~ *Owner* a minimum of *five (5) days* ~~48 hours~~ prior to the time of the required outage.

c. If execution of the ~~p~~*Project W*ork requires a facility outage, the Contractor shall contact the *Owner* ~~FAA Point-of-Contact~~ a minimum of *five (5) days* ~~72 hours~~ prior to the time of the required outage..

d. Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor's equipment or personnel whether by *intentional conduct*, negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA requirements *at the Contractor's sole cost*. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.

e. If the ~~*p*~~*Project W*ork requires the cutting or splicing of FAA owned cables, the *Owner* ~~FAA Point of Contact~~ shall be contacted a minimum of *five (5) days* ~~72 hours~~ prior to the time the cable work commences. The FAA reserves the right to have *a* FAA representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA restricts the location of where splices may be installed. If *a* cable splice is required in *a* location that is not permitted by FAA, the Contractor shall furnish and install *a* sufficient length of new cable that eliminates the need for any splice.

70-~~15.~~218 NAVAIDS AND OTHER SIGNALS

There are installed on the Airport FAA NAVAIDs or Owner NAVAIDs and other electronic and visual signals (hereinafter collectively NAVAIDS) which may include but not be limited to, ASR, UHF, NDB and VHF Receivers and Transmitters, National Weather Service Facilities, lighting, electric cables and controls relating to such NAVAIDs and facilities and other electric power cables serving other facilities. Such NAVAIDs, National Weather Service and other facilities and electric cables must be fully protected during the entire construction time. Work under this Contract can be accomplished in the vicinity of these facilities and cables only at approved periods of time, which approval is subject to withdrawal at any time because of changes in the weather, emergency conditions on the existing airfield areas, anticipation of emergency condition and for any other reason as determined by the OAR acting under the orders and instructions of the Owner or the designated FAA representative. Any instructions to the Contractor to clear any given area, at any time by the OAR, the Airport Director of Operations or the Air Traffic Control Tower (by radio or other means) shall be immediately executed. Construction Work will be commenced in the cleared area only when additional instructions to this effect are issued. To the extent that they are known, the approximate locations of NAVAIDs, National Weather Service and other facilities have been indicated on the Contract Drawings. The Owner does not warrant or guaranty the accuracy or completeness of the location information relating to NAVAIDs, National Weather Service and other facilities appearing on the Contract Documents. Any inaccuracy or omission shall not relieve the Contractor of its responsibility to protect such existing facilities from damage or unscheduled interruption of service.

Power and control cables leading to and from any NAVAIDs, National Weather Service and other facilities will be marked in the field by the Contractor, before any work in its general vicinity is started. Thereafter, through the entire time of this construction, they shall be protected from any possible damage.

These special provisions intend to make perfectly clear the need for protection of FAA NAVAID's, National Weather Service and other facilities and cables by this Contractor at all times.

The Contractor shall immediately repair at its expense, with identical material by skilled workers, any underground cables serving FAA NAVAIDs, National Weather Service and other Airport facilities, which are damaged by its workers, equipment or Work. Prior approval of the FAA must be obtained for the materials, workers, time of day or night, method of repairs, or for any temporary or permanent repairs the Contractor proposes to make to any FAA NAVAIDs, National Weather Service facilities or other cables and controls serving such NAVAIDs and facilities which are damaged by the Contractor. Prior approval by the Owner must be obtained for the materials, workers, time of day or night, method of repairs for any temporary or permanent repairs the Contractor proposes to make to any of the airport facilities and cables damaged by the Contractor.

70-~~16~~*19* FURNISHING RIGHTS-OF-WAY.

The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-~~17~~*20* PERSONAL LIABILITY OF PUBLIC OFFICIALS.
In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, ~~RPR~~ OAR, their authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-~~18~~*21* NO WAIVER OF LEGAL RIGHTS.
Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the Work, nor shall the Owner be precluded or stopped from recovering from the Contractor or their surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their obligations under the Contract. A waiver on the part of the Owner of any breach of any part of the Contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the Contract, shall be liable to the Owner for latent defects, fraud, or ~~such~~ gross *negligence* mistakes ~~as may amount to fraud,~~ or as regards the Owner's rights under any warranty or guaranty.

By making the final payment, the Owner does not waive any of its rights in law or under the Contract arising from:

.1 liens, claims, security interests or encumbrances arising out of the Contract and unknown or unsettled at the time final payment is made;
.2 latent defects;
.3 failure of the Work to comply with the requirements of the Contract Documents;
.4 terms of special warranties required by the Contract; or
.5 any claim for overpayment, including, but not limited to, those resulting directly or indirectly from any erroneous measurement, estimate or quantity.

70-~~19~~*22* ENVIRONMENTAL PROTECTION.
The Contractor shall comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-~~20~~*23* ARCHAEOLOGICAL AND HISTORICAL FINDINGS.
Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during their operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the ~~RPR~~ *OAR*. The ~~RPR~~ OAR will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform *Extra Work* ~~extra work~~, such shall be covered by an appropriate *Contract Modification* ~~contract change order or supplemental agreement~~ as provided in Section

40, paragraph 40-06, EXTRA WORK, and Section 90, paragraph 90-11, PAYMENT FOR EXTRA WORK AND FORCE ACCOUNT WORK. If appropriate, the *Contract Modification* ~~contract change order or supplemental agreement~~ shall include an extension of contract time in accordance with Section 80, paragraph 80-09, DETERMINATION AND EXTENSION OF CONTRACT TIME.

70-2124 PROTECTION OF PERSONS AND PROPERTY

A. Safety Program

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and implementing and monitoring a safety program in connection with the performance of the Work including but not limited to those requirements in this GP-80. The Contractor shall submit to the Owner a copy of its safety plan within ten (10) business days of issuance of the Notice to Proceed. The Contractor's Safety Plan shall, at a minimum, meet the requirements of the latest edition of ANSI/ASSE A10.38.

In the event the Contractor fails to initiate, maintain, supervise and monitor the safety of its operations during the performance of the Work, including the operations of its Subcontractors, Suppliers and any others for whom the Contractor is responsible, then the Owner may, without reservation, pursue any rights or remedies against the Contractor that are available, under this Contract or by law, including withholding of payment.

B. Protection Of Persons and Property

The Contractor shall comply with, and give notices required by, applicable laws, ordinances, codes, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss. In addition to the foregoing, the Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent causing or contributing to the damages, injury or loss to:

1. *employees and other persons who may be affected in, on, or around the Project site and thereby;*

2. *the Work, materials and equipment to be incorporated therein, whether in storage, on or off the site, that is under the care, custody or control of the Contractor or the Contractor's Subcontractors; and*

3. *other property improvements and infrastructure at the site or adjacent thereto, including but not limited to trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.*

The Contractor shall erect and maintain, as required by existing conditions and the Contract Documents, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying the owners and users of adjacent sites and utilities of hazardous or dangerous conditions.

When use or storage of hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel and within federal, state & local regulations applicable to such hazardous materials.

The Contractor shall, at its sole cost and expense, promptly pay or, repair, or remedy all damage, injury, and loss to property referred to in Paragraphs 2 and 3 above caused in whole or in part by the

Contractor, a Subcontractor or anyone directly or indirectly employed by any of them; by a defect in the Work or any element of the Work; or by anyone for whose acts they may be responsible for, to the extent the damage or loss is not attributable to acts or omissions of the Owner, OAR or Designer or anyone directly or indirectly acting on their behalf, *or by anyone for whose acts any of them may be liable. The foregoing obligations of the Contractor are in addition to the Contractor's other obligations under this Contract. The Owner, at its option and in its sole discretion, may repair or remedy damages to property caused by the Contractor, or for which the Contract is otherwise responsible, and charge the Contractor all cost for such repair or remedy as a Backcharge.*

The Contractor shall designate a responsible member of the Contractor's organization as the onsite safety representative whose duty shall be the safety of persons and property. This person shall be the Contractor's Superintendent unless otherwise designated by the Contractor in writing to the Owner and OAR. The Contractor shall notify the Owner and OAR immediately when a serious injury occurs on the Project and shall provide written notice of the injury on the same business day of the occurrence, if at all possible. The notice shall provide a description of the incident, including the location and time of the incident, the names of the people involved and the names of witnesses, if any. The Contractor shall cooperate with any investigation of the incident.

The Contractor shall not load (for example, by delivery of materials, structural or physical loads) or permit any part of the construction or site to be loaded so as to endanger the safety of the traveling public, the airlines, tenants, or other airport users, the Owner, OAR, Designer, Contractor or their agents, representatives or employees.

The Contractor shall protect adjoining private or municipal property and shall provide barricades, temporary fences, and covered walkways required to protect the safety of passers-by, as required by prudent construction practices, local building codes, ordinances or other laws, or the Contract Documents.

The Contractor shall take all reasonable precautions to protect and keep the Work, materials and equipment free from injury or damage from inclement weather conditions, such as but not limited to *rain, wind, storms, frost or heat. If extreme adverse weather conditions arise, preventing the Contractor from continuing operations safely in spite of having implemented weather precautions, the Contractor shall coordinate approval from the Owner and the OAR for cessation of Work until deemed safe to resume operations. The Contractor shall not permit open fires on the Project site.*

The Contractor shall, at its sole cost and expense, promptly repair any damage or disturbance to walls, utilities, sidewalks, curbs and the property of the Owner or any other person (including municipalities) resulting from the performance of the Work, whether by it or by its Subcontractors at any tier. The Contractor shall maintain streets and working roads, within the project site and areas which it or its subcontractors may use to access the project site, *in good repair and in an acceptable and usable condition.*

C. Hazardous Materials

In the event the Contractor encounters on the site material reasonably believed to be hazardous material, such as asbestos or polychlorinated biphenyl (PCB), the Contractor shall immediately stop work in the area affected and verbally report the condition to the Owner and OAR followed by notification in writing. The Contractor shall not resume Work in the affected area until written agreement between the Owner and Contractor, after the material has been determined by an independent laboratory or consultant to be not hazardous, or the Contractor has agreed to remove and or remediate the hazardous material, as applicable, in a Contract Modification.

The Contractor shall not be required to perform without its consent any Work relating to hazardous material.

D. Emergencies

In an emergency affecting the safety of persons or property, the Contractor shall act so as to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined in accordance with GP-40. In addition to any other right under the Contract,in an emergency affecting the safety of persons or property, the Owner may take any action that, in its sole discretion, it deems necessary to prevent threatened damage, injury, or loss.

70-~~21~~25 INSURANCE

A. CONTRACTOR'S INSURANCE

At its sole expense, Contractor shall maintain the following insurance and bonds throughout the term of this Contract, including any extensions or renewals, and such insurance requirements shall provide coverage for the Contractor, its subcontractors, representatives, and anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

Contractor shall provide evidence of insurance reflecting compliance with the insurance requirements set forth below. Certificate(s) of Insurance shall be remitted using an ACORD form, or in a form acceptable to the Owner and submitted to the Owner's Contracts and Grants Manager prior to contract execution. Any deductible or self-insurance retention must be indicated on the Certificate of Insurance.

Owner may elect to utilize a third party for the collection and monitoring of Contractor's insurance. Contractor shall respond to all correspondence from this third party in a timely manner.

Upon written request, Contractor shall provide or obligate its insurer to provide a copy of its insurance policies, including all forms and endorsements.

The minimum insurance requirements are as follows:

.1 Commercial General Liability insurance covering property damage and bodily injury (including death), which shall include, but not be limited to, premises, products and completed operations, contractual liability with limits as set forth in General Provisions 20-23. Completed Operations coverage for the entire period of repose under Chapter 95 of the Florida Statutes is required. This insurance shall be written on an occurrence basis.

.2 Automobile Liability insurance covering motor vehicles, including, but not limited to owned, non-owned, or hired vehicles, used in conjunction with the performance of the Work, resulting in property damage or bodily injury (including death) with limits of liability as set forth in the Instructions to Bidders.

.3 The Greater Orlando Aviation Authority and the City of Orlando and their members (including without limitation, members of the Owner's board and the City Council and members of the citizens' advisory committees of each), the OAR, and the Designer shall be named as additional insured under the coverage required in paragraph .1 and .2 above.

.4 Workers' Compensation in statutory limits in accordance with Florida law and Employer's Liability insurance covering all Contractor's employees or persons acting at the direction of the Contractor in the performance of the Work with policy limits as set forth in the Instructions to

Bidders. If Contractor is self-insured, Contractor shall provide evidence of authorization from State of Florida to be self-insured. Owner does not accept State of Florida exemptions. Contractor agrees that any insurance or self-insurance shall include a waiver of any rights to subrogation against Owner.

.5 If required by General Provisions 20-23, Pollution Liability insurance covering any liability including clean-up expenses, resulting from any pollution or environmental impairment, which arises out of or in connection with the performance of the Work with a limit of liability as set forth in General Provisions 20-23. If coverage is provided on a claims-made basis, such insurance shall be maintained or include tail coverage for three (3) years from the date the Agreement is terminated or expired or from the date of Final Completion. The Greater Orlando Aviation Authority and the City of Orlando and their members (including without limitation, members of the Owner's board and the City Council and members of the citizens' advisory committees of each) shall be named as additional insured without limitations.

.6 If required by General Provisions 20-23, Privacy Liability Insurance covering Contractor for claims, losses, and expenses resulting from the compromise, breach, or release of confidential information or security information, whether in electronic or physical form, due to wrongful act or failure to secure such data in the care, custody and control of Contractor with limits as set forth in the Instructions to Bidders.

.7 Contractor hereby agrees to the following as it relates to the above required insurance:

.1 Insurance shall be carried with an insurance company (or companies) authorized to do business in the State of Florida and have a current financial rating by A.M. Best of A- VII or better and written on forms and endorsements acceptable to Owner.

.2 Insurance shall be primary and not contributory to any other insurance (or self-insurance) maintained by the Owner, including any deductibles or self-insured retentions and that any other insurance shall be considered excess insurance only.

.3 The policy limits required herein may be met by the combination of a primary liability insurance policy and an Umbrella or Excess Liability insurance policy, which will be written on a follow-form basis.

.4 Contractor shall immediately notify Owner, in writing, of any adverse material change in Contractor's required insurance. For the purpose of this insurance section, adverse material change shall mean any reduction in the limits of the insurer's liability, any reduction of any insurance coverage, any increase in Contractor's deductible or self-insured retention, or any non-renewal or cancellation of required insurance.

.5 Self-insured retentions and deductibles shall not exceed the requirements set forth in General Provisions 20-23.

.6 Costs of insurance premiums, deductibles, or self-insured retentions shall not be charged back to Owner unless included in an approved Contract Modification. Owner shall have the right to alter the monetary limits or the coverages required during the term of this Contract, and Contractor shall comply with all reasonable requests with respect thereto. Any additional insurance premium to Contractor for the mid-term change in insurance requirement must be justified as specific to the Project, before Owner considers changes in Total Contract Price for chargeback to Owner.

.7 The Owner may, at its sole discretion, suspend or terminate all Work pursuant to General Provisions 80-12, pending Contractor's inability to meet insurance requirements of this Contract or Contractor's failure to renew or replace insurance. Owner's acceptance of Contractor's proof of insurance shall not be deemed a waiver of the insurance requirements herein.

B. PROPERTY INSURANCE

Unless otherwise addressed in the Contract Documents, the Owner shall, on behalf of itself, Contractor, and subcontractors, procure and maintain an "All Risk" property insurance policy, including builder's risk coverage and equipment breakdown, resulting in damages or loss to real and personal property, including materials procured related to Work at the Project.

Coverage under the Owner's property insurance program does not include any coverage for any equipment or tools of the Contractor, its Subcontractors or suppliers of any tier. Contractor agrees to inform its Subcontractors and suppliers that the Owner shall not be responsible for damages or loss (or theft) to tools and equipment while on Owner's property, whether at the Project jobsite or otherwise.

Coverage under the Owner's property insurance program does not include any coverage for the Contractor's or its Subcontractors loss of income, business interruptions, extra expense or other time element loss, including, without limitation, any such loss arising from a covered claim.

Coverage under the Owner's property insurance program does not include coverage for any materials stored off-site, including in transit, for which the Contractor or its Subcontractors or Suppliers has responsibility for care, custody and control. Contractor shall ensure it or any party with whom materials are in its care, custody and control, shall be responsible for the full replacement cost arising from any damages or loss (including theft). Any insurance on such stored materials or materials in transit shall be evidenced to Authority (or designated OAR) upon request.

Contractor shall be responsible for the first One Hundred Thousand Dollars ($100,000) deductible for each occurrence for any claim under Owner's Property Insurance Program, for damages or loss (including theft, malicious mischief, or vandalism).

Property insurance coverage, including equipment breakdown, shall remain in effect from the commencement date of the Work and shall terminate at the earliest of the following dates: (i) as to the Work covered by the fully executed Partial Occupancy and Use Agreement (POUA), the effective date set forth in the POUA; (ii) upon any portion of Work permanently abandoned or terminated by Contractor prior to Substantial Completion; (iii) upon termination of this Contract by Owner; or (iv) upon date of Substantial Completion as certified in accordance with General Provisions 50-24.

Any damage or loss (including theft) to Owner's property, including Work at Project site, materials, appurtenant property, arising from the actions, errors, omission or improper performance by Contractor or its Subcontractors of any tier shall not prohibit Owner from making a claim under the Property Insurance Program. Any claim covered by this Property insurance program shall not absolve Contractor or its subcontractors from any responsibility or liability of claim, damages, or loss. Owner or its insurer, on its behalf, does not waive any right to recover from Contractor, its Subcontractors, or each of its insurers for such damages or loss.

If Contractor requests in writing that this insurance extend to the Contractor and its subcontractors for portions noted above as not covered or for other special hazards not described herein; then Contractor

agrees to reimburse Owner for premiums paid at current market rate for such increase in coverage and accepts responsibility for deductibles.

Owner shall notify Contractor in writing, prior to the Commencement of Work, if the Owner does not intend to provide property insurance. In that event, Contractor shall then procure such insurance as will protect the interests of the Owner, Contractor and Subcontractors, and by appropriate Change Order, shall be reimbursed for the actual cost of such insurance.

All proceeds paid by the Owner's property insurance shall be payable to Owner, as fiduciary for the insureds, as their interest may appear. Any portion of such proceeds (less applicable deductible) allotted to insured(s), other than Owner, shall be paid to Contractor. Contractor shall be responsible for distribution of any proportion of proceeds in similar manner to its Subcontractors.

C. CONTRACTOR'S PROPERTY

Contractor shall maintain insurance or require a third party to maintain insurance coverage for any real or personal property used in conjunction with the Work and materials stored or in transit in preparation for the Work. Such coverage shall be on a replacement cost basis. Any failure to respond to Owner's claim for recovery for damages or loss by repair or replacement, Contractor shall be deemed in breach in contract for which the Contractor shall be held liable. Contractor shall be responsible for first dollar of claim for damages, regardless of deductible, self-insured retention, failure to insure, or self-insurance by Contractor, Subcontractor, suppliers, or storage/warehouse provider.

D. REPORTING INCIDENTS THAT MAY GIVE RISE TO AN INSURANCE CLAIM

Contactor shall notify the Owner, within three business days, and document in detail any incident occurring during the performance of Work or arising directly or indirectly from the Project that may give rise to a claim by a third party against Owner, Contractor, and/or Subcontractors of any tier shall be documented in detail.

Contractor shall provide written notice, no less than quarterly, to Owner and OAR of any claims and incidents that may give rise to a claim. Contractor shall retain this documentation in accordance with General Provisions 50-29.

Contractor shall cooperate with Owner and its agents or representative, in the investigation and resolution of any incident that may give rise to a claim or actual claim made against Owner, Contractor or Subcontractor of any tier arising directly or indirectly from the Project. Any action taken by Contractor, Subcontractor, or its insurer to resolve, settle or release itself from a claim shall be coordinated with Owner and OAR. No release shall be executed without final approval from Owner, which shall not be unreasonably withheld.

Upon written request and at completion of the Work, Contractor agrees to provide a detailed claims history of incidents and claims arising directly or indirectly from the Project.

70-26 CONFIDENTIALITY

The Contractor agrees, during the term of this Agreement and forever thereafter, not to knowingly divulge, furnish or make available to any third person, firm or organization, without the Owner's prior written consent, or unless incident to the proper performance of the Contractor's obligations hereunder, or in the course of judicial or legislative proceedings where such information has been properly subpoenaed, any information generated by the Contractor or received from the Owner, concerning the Work rendered by the Contractor or any subcontractor pursuant to this Agreement. Contractor shall provide Owner with immediate notice

and provide an opportunity to defend or object to the production of such information if Contractor is served with a subpoena or other judicial or legislative process. The Owner's intent is to protect security and proprietary information in accordance with State or Federal Regulations.

70-27 PUBLIC RECORDS

When the Contractor receives any request to inspect or copy any records that relate to this Contract, it shall promptly provide the Owner with a copy of the request. The Owner will respond to each such request on behalf of itself and the Contractor and the Contractor agrees to fully cooperate with the Owner with regard to all records requests and comply with all decisions made by the Owner regarding the production/disclosure. The Contractor shall:

a. *Keep and maintain public records that ordinarily and necessarily would be required by the Owner in order to perform the services being performed by the Contractor.*

b. *Upon request from the Owner's custodian of public records, provide the public with access to public records on the same terms and conditions that the Owner would provide the records and at a cost that does not exceed the cost provided in chapter 119, Florida Statutes, as amended, or as otherwise provided by law.*

c. *Except as authorized by law, ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed for the duration of the Contract term, as well as following completion or termination of the Contract if the Contractor does not transfer the records to the Owner.*

d. *Upon completion or termination of the Contract, transfer, at no cost, to the Owner all public records in possession of the Contractor or keep and maintain the public records required by the Owner and the law to perform the Work. If the Contractor transfers all public records to the Owner upon completion or termination of the Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the Owner in a format that is compatible with the information technology systems of the Owner. If the Contractor keeps and maintains public records upon completion or termination of the Contract, the Contractor shall meet all applicable requirements for retaining public records.*

e. *Failure to grant such public access or otherwise comply with the Owner's request for records will be grounds for immediate termination of this Contract by the Owner. In the event of such failure, the Owner shall also enforce the Contract provisions in accordance with the Contract.*

f. *Failure to provide the public records to the Owner within a reasonable time may also subject the Contractor to penalties under section 119.10, Florida Statutes.*

g. *If a civil action is filed against Contractor to compel production of public records relating to this Contract, Contractor will be solely responsible and liable for its attorney's fees and any resulting damages.*

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, THE CONTRACTOR MUST CONTACT THE OWNER'S CUSTODIAN OF PUBLIC RECORDS, WHO CAN BE REACHED AT:

www.orlandoairports.net/publicrecords; (407) 825-2400 (PHONE NUMBER); AND "GREATER ORLANDO AVIATION AUTHORITY, PUBLIC RECORDS" ONE JEFF FUQUA BOULEVARD, ORLANDO, FLORIDA 32827.

70-28 WHISTLE BLOWER REPORTING LINE

The Owner is committed to the highest level of integrity in its operations and is fully committed to protecting the organization, its operations, and its assets against fraud, waste and abuse. The Owner has established a Whistle-Blower Reporting Line with a third-party service provider as a means to report suspected fraud, waste or abuse of Owner resources in connection with Owner operations. Should Contractor suspect any fraud, waste or abuse in connection with any Work under this Contract, including any work of its subcontractors or laborers, it shall promptly report such activity by calling 1-877-370-6354, through email to GOAA@integritycounts.ca or through the online reporting form at www.integritycounts.ca/org/GOAA. The Contractor shall include this reporting requirement in all subcontracts and vendor agreements. The Contractor is further encouraged to report any suspected fraud, waste or abuse it suspects in connection with any other airport operation or project.

70-29 E-VERIFY

Effective January 1, 2021, the Contractor shall register with and utilize the U.S. Department of Homeland Security's Employment Eligibility Verification System (E-Verify), in accordance with the terms governing the use of the system, to verify the work authorization status of all newly hired employees, performing work in the United States. The Contractor shall include an express provision in all Subcontracts requiring the Subconsultants and Subcontractors to do the same and require all Subconsultants and Subcontractors to provide the Contractor with an affidavit stating that the Subconsultant/Subcontractor does not employ, contract with, or subcontract with an unauthorized alien. The Contractor must retain all such affidavits for the duration of the Contract. In accordance with Florida Statutes §448.095, the Owner shall terminate this Contract if Owner has a good faith belief that the Contractor knowingly employs an unauthorized alien or has otherwise violated Florida Statute §448.09(1). The Owner shall require the Contractor to terminate the contract of a Subconsultant/Subcontractor if Owner has a good faith belief that the Subconsultant/Subcontractor has knowingly violated Florida Statute §448.09(1). The Contractor may challenge any such termination in accordance with Florida Statutes §448.095. Consequences for a violation of this subsection also include liability for the Owner's costs as a result of the termination and debarment for at least one (1) year in accordance with Florida Statutes §448.095.

END OF SECTION 70

SECTION 80 EXECUTION AND PROGRESS

80-01 SUBLETTING OF CONTRACT.

The Owner will not recognize any subcontractor on the *W*ork. The Contractor shall at all times when ~~w~~*Work* is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the ~~Resident Project Representative (RPR)~~ *OAR*.

The Contractor shall perform, with his organization, an amount of work equal to at least 25% ~~percent~~ of the *Total* ~~total~~ Contract ~~cost~~ *Price*.

Should the Contractor elect to assign their Contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner. *The Owner may withhold its consent for any reason whatsoever.*

The Contractor shall provide copies of all subcontracts to the ~~RPR~~ *OAR as soon as practicable after Notice of Intent to Award, and in no event not less than* 14 days prior to *the subcontractor* being utilized on the project. As a minimum, the information shall include the following:

- Subcontractor's legal company name.
- Subcontractor's legal company address, including County name.
- Principal contact person's name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

Any transfer of this Contract by merger, consolidation or liquidation or (unless the stock of the Contractor is traded on a national stock exchange or in a generally recognized over the counter securities market) any change in ownership of or power to vote a majority of the outstanding voting stock or ownership interests of the Contractor shall constitute an assignment of this Contract for the purposes of this Contract. In the event the Contractor assigns or attempts to assign any right or obligation arising under this Contract without the Owner's prior written consent, the Owner shall be entitled to terminate this Contract, in the Owner's sole discretion.

Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after Notice of Intent to Award shall furnish in writing to the OAR the names of persons or entities (including, but not limited to, those who are to furnish specially fabricated materials or equipment) proposed for each portion of the Work. The Owner shall have the right, but not the obligation, to investigate and object, on a reasonable basis, to any such proposed person or entity. The OAR shall promptly notify the Contractor if any such objection exists.

The Contractor shall not contract with a proposed person or entity to whom the Owner or OAR has made reasonable and timely objection.

If the Owner has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner has no reasonable objection. The Total Contract Price shall not be increased by the difference in cost occasioned by such change if the Owner's objection arises from the

failure of such person or entity to conform to the requirements of the Contract Documents, or if the person or firm is proposed as a DBE, MWBE, or LDB, and is not certified in accordance with the Owner's Policies and Procedures. If the Owner's objection is for some other reason, such as apparent lack of responsibility (i.e., poor performance on prior projects, lack of experience, capacity or financial viability), then the Contractor may be allowed an increase in the Total Contract Price provided that the Contractor has acted promptly and responsively in submitting substitute subcontractors.

Once the Contractor enters into a subcontract, the Contractor may only replace a Subcontractor when required by the Owner or when the Contractor can demonstrate to the Owner's satisfaction that the Subcontractor lacks financial viability, cannot meet construction schedules, or produces inferior or substandard work. If the replacement results in a decrease in the Contractor's costs, Owner shall receive a deductive Change Order. If, however, the replacement results in an increase in the Contractor's costs, an increase in the Total Contract Price will only be allowed if the replacement is required by the Owner.

80-02 SUBCONTRACTUAL RELATIONS

The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents. Subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

All work performed for the Contractor by a Subcontractor shall be pursuant to an appropriate written agreement between the Contractor and the Subcontractor. The Contractor shall provide to the Owner or OAR, if requested, copies of all Subcontracts within seven (7) days following the Owner's or OAR's request.

The Owner shall have no contractual liability or obligation to any Subcontractor for Work performed pursuant to their agreement with the Contractor. The Contractor shall be liable to the Owner for all acts and omissions of the Subcontractors and the Contractor shall be solely responsible for scheduling and coordinating the Work of all Subcontractors, suppliers and any other person performing work on the project.

DBE Requirements. In addition to all requirements regarding Subcontractors, the Contractor shall:

i. Execute subcontracts with the DBE's identified in Contractor's bid, with the amounts and scope of work reflected in the bid;

ii. Provide Owner copies of all executed subcontracts with DBEs within 7 days of execution;

iii. Maintain the level of DBE participation included in Contractor's bid;

iv. Provide notice to Owner of any changes to DBE subcontracts within 30 days of execution, including those that reduce the scope or amount of payment; and

v. Provide evidence of payment to DBE subcontractors to Owner within 30 days of payment either in the form of cancelled checks or ACH payments or other format acceptable to the Owner.

80-023 NOTICE TO PROCEED (NTP).

The Owner's *N*otice to *P*roceed will state the date on which Contract *T*ime commences. ~~The Contractor is expected to commence project operations within [____] days of the NTP date. The Contractor shall notify the RPR at least [24 hours] in advance of the time contract operations begins. The Contractor shall not commence any actual operations prior to the date on which the notice to proceed is issued by the Owner.~~

The date of commencement of the Work is the effective date of the Notice To Proceed. The date shall not be postponed by the Contractor's failure to act or by such failures of persons or entities for which the Contractor is responsible.

The Contractor shall not commence operations for the Work on the Owner's property prior to the effective date of a Notice to Proceed and prior to the effective date of the Contractor's compliance with GP-70.

The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial and Final Completion within the time frames established by the Contract Documents.

80-034 EXECUTION AND PROGRESS.

~~Unless otherwise specified, the Contractor shall submit their coordinated construction schedule showing all work activities for the RPR's review and acceptance at least [10 days] prior to the start of work.~~ The Contractor's progress schedule, once accepted by the *OAR*, will represent the Contractor's baseline plan to accomplish the project in accordance with the terms and conditions of the Contract. The *OAR* will compare actual Contractor progress against the baseline schedule to determine that status of the Contractor's performance. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the *Bid Documents*.

Preliminary Schedule. The Contractor shall submit to the OAR a Preliminary Schedule within fourteen (14) days after the date of the Notice of Intent to Award the Contract. The Preliminary Schedule shall be in a bar chart format covering all major items of the Work including construction activities, milestone dates, and procurement of materials and equipment. The Preliminary Schedule shall identify approximate start and finish dates and the sequence in which the Contractor proposes to carry out the Work. The Preliminary Schedule shall be based upon the Contract Time specified in the Contract Documents. Upon receipt by the Contractor of the Notice to Proceed and until the Baseline Schedule is accepted by the OAR, the Contractor shall proceed with the Work in accordance with the Preliminary Schedule.

Baseline Schedule. Within thirty (30) days of the issuance of the Notice to Proceed, the Contractor shall submit to the OAR a proposed Baseline Schedule which shall be in the format as required by the Specifications and Drawings. The OAR will review the proposed Baseline Schedule and present the Contractor with any comments. The Contractor shall resubmit the proposed Baseline Schedule for review within fourteen (14) days after receipt of comments. Upon the OAR's acceptance of the Baseline Schedule, the Contractor shall proceed with the work in accordance with the accepted Baseline Schedule. The OAR's acceptance of the Baseline Schedule shall not impose on the Owner any responsibility to the Contractor for the accuracy or reasonableness of the Baseline Schedule nor shall the review and acceptance relieve the Contractor from full responsibility. Upon acceptance by the OAR, the Baseline Schedule shall be the basis for evaluation of all time related issues, unless and until a Progress Schedule is accepted which supersedes the Baseline Schedule logic. The Owner shall have no obligation to process or issue payment for an Application for Payment until the Contractor's baseline schedule has been accepted by the OAR.

Progress Schedules. Each month the Contractor shall submit a Progress Schedule to update the progress of the Work. Progress Schedules must be submitted with each Contractor's Application for Payment and the data contained in the Progress Schedule must accurately correspond to the progress of the work information contained in the Contractor's Application for Payment. The Contractor's Progress Schedule must accurately reflect the actual progress of the Work as well as any revisions to the logic, sequence, durations of work activities, or level of detail of the number, description, or division of the work activities. The Owner may refuse to process or issue payment for an Application for Payment without the Contractor's submission of a current, accurate, and updated Progress Schedule that is satisfactory to the OAR. The OAR may specify the format in which the Progress Schedules shall be delivered by the Contractor. The

Contractor's failure to submit such updated Progress Schedule with an Application for Payment shall result in a waiver by Contractor of any and all claims for the time extensions for the time period covered by the Application for Payment.

If the Contractor's Progress Schedule reflects that completion of the Contract or a Contract milestone date is not within the Contract Time, then the Contractor must submit with the Progress Schedule the Contractor's proposed recovery plan for completing the Work within the Contract Time. In the event the Contractor claims entitlement to a time extension which is disputed by the Owner, the Contractor's recovery plan shall not be based upon receiving disputed time extensions.

The Contractor shall fully comply with all time and other requirements of the Contract Documents. The Owner's approval and payment of an Application for Payment, without the submission of a current, accurate Baseline or Progress Schedule, shall not constitute a waiver of either the requirement for such updates or the Owner's right to withhold payment, and the Contractor shall not be relieved from the obligation to complete the Work within the Contract Time.

The Contractor's *preliminary, baseline or* progress ~~schedule~~ *schedules*, when approved by the ~~Engineer~~ *OAR*, may be used to establish major construction operations and to check on the progress of the work. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the ~~proposal~~ *Bid*.

Time limits stated in the Contract are of the essence of the Contract. The Contractor, by executing the Agreement, confirms that the Contract Time is a reasonable period for performing the Work. The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial and Final Completion within the time frames established by the Contract.

~~If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the RPR's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule.~~ Should the execution of the work be discontinued for any reason, the Contractor shall notify the ~~RPR~~ *OAR* at least 24 in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the NTP is issued by the Owner.

The project schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified. It shall include information on the sequence of work activities, milestone dates, and activity duration. The schedule shall show all *Work* items identified in the Bid Documents for each work area and shall include the ~~p~~*Project* start date and end date.

The Contractor shall maintain the *Work* schedule and provide an update and analysis of the progress schedule on a twice monthly basis, or as otherwise specified in the Contract. Submission of the *Work* schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all ~~w~~*Work* to comply with the requirements of the Contract.

80-045 LIMITATION OF OPERATIONS.
The Contractor shall control their operations and the operations of their subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the *W*ork requires the Contractor to conduct their operations within an AOA of the airport, the *W*ork shall be coordinated with ~~airport operations (through the RPR)~~ *the OAR* at least *72 hours* prior to commencement of such *W*ork. The Contractor shall not close an AOA until so authorized by the ~~RPR~~ *OAR* and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-09, CONSTRUCTION SAFETY AND PHASING PLAN (CSPP).

When the *C*ontract *W*ork requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP) and as listed below, cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently. ~~as follows:~~ *The Contractor shall refer to the Contract Drawings for specific information on work phasing and airfield safety for times of closure and closure information.*

The Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction and the approved CSPP.

The Contractor shall not commence any new work which is prejudicial to the work already started.

Personal vehicles of employees and vehicles operated by vendors of goods or services will not be permitted beyond the Contractor's parking area.

No signs shall be placed on the site, nor shall any photographs be taken without the OAR's prior written consent. No visitors other than persons engaged in the Work shall be permitted on the construction site without the OAR's prior written consent.

80-04.~~1~~6 OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION.
All Contractor's operations shall be conducted in accordance with the approved ~~p~~*Project* Construction Safety and Phasing Plan (CSPP) and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the current version of AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP included within the *C*ontract *D*ocuments conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a SPCD that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the ~~p~~*Project.* The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and SPCD and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Owner. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.

80-0~~5~~7 CHARACTER OF WORKERS, METHODS, AND EQUIPMENT.
The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the Work to full completion in the manner and time required by the Contract, plans, and specifications.

The resumes of the Contractor's key personnel, including but not limited to the Project Manager and Superintendent, that the Contractor intends to use on the Project and an organizational chart shall be submitted to the OAR prior to the commencement of Work.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the ~~RPR~~ *OAR*, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the ~~RPR~~ *OAR*, be removed immediately by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the Work without approval of the ~~RPR~~ *OAR. Removal and replacement of personnel pursuant to this Section shall not give rise to entitlement by the Contractor to additional time or money, nor shall it constitute intentional interference or active interference by the Owner.*

Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the ~~RPR~~ *OAR* may suspend the Work by written notice until compliance with such orders.

Failure to fully staff the project with skilled workers, supervision, or project management personnel shall be cause for termination of the Contract or such other remedies as set forth in the Contract. The Contractor assumes all risks of delays or extra costs which may be associated with improper Department of Labor classifications and labor disputes involving the Contractor, its Subcontractors or Suppliers and in no event shall the Contractor be entitled to additional compensation or an extension of Contract Time due to any such improper Department of Labor classifications and labor disputes.

Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, services, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and all other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. The Contractor shall not be entitled, under any circumstances, to any increased cost of doing business, including but not limited to, increased costs of materials, trucking, and fuel, unless specifically addressed in the Specifications.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall be such that no injury to previously completed work, adjacent property, or existing airport facilities will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the Contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless otherwise authorized by the ~~RPR~~ *OAR*. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the ~~RPR~~ *OAR* to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the ~~RPR~~ *OAR* determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or

equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the ~~RPR~~ *OAR* may direct. No change will be made in basis of payment for the Contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this paragraph.

80-0~~6~~8 TEMPORARY SUSPENSION OF THE WORK.

The Owner shall have the authority to suspend, *delay or interrupt* the Work wholly, or in part, ~~for such period or periods the Owner may deem necessary, due~~ *without cause, or for reasons including but not limited to* ~~unsuitable~~ *abnormal inclement* weather *(as defined in GP-40)*, or other conditions *or circumstances which, in the Owner's discretion, are* considered unfavorable for the execution of the Work~~, or for such time necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the *cContract*~~. *The suspension, delay or interruption shall be for such period or periods as the Owner may deem necessary. An order by the Owner to suspend the Work shall be in writing except in cases of bona fide emergencies.*

In the event that the Contractor is ordered by the Owner~~, in writing,~~ to suspend ~~work~~, *delay or interrupt the Work* for some unforeseen cause not otherwise provided for in the Contract and over which the Contractor has no control, *and which could not have reasonably been anticipated or avoided by the Contractor, the Contractor shall be granted an appropriate extension of Contract Time for the period of suspension, which shall not exceed the day-for-day period of suspension, and* the Contractor may be reimbursed for *an equitable adjustment to the Total Contract Price for the increased direct costs of maintaining and securing the Work during the suspension period, subject to the limitations of GP-40.* ~~actual money expended on the Work during the period of shutdown~~. ~~No allowance will be made for~~ *In such an event, the Contractor shall not be entitled to compensation for home office overhead or* anticipated profits~~.~~ *during the period of suspension.* The period of shutdown shall be computed from the effective date of the written order to suspend *~~w~~Work* to the effective date of the written order to resume the *~~w~~Work*. Claims for such compensation shall be filed with the ~~RPR~~ *OAR* within the time period *defined in GP-80.* ~~stated in the RPR's *OAR's* order to resume work.~~ The Contractor shall submit with their ~~own~~ *cClaim* information substantiating the amount *and time* shown on the *Claimas required by GP-40 and 80.* The ~~RPR~~ *OAR* will forward the Contractor's *Claim* to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather or for any other delay provided for in the ~~c~~Contract, plans, or specifications.

If it becomes necessary to suspend *~~w~~Work* for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the *~~w~~Work* performed and provide for normal drainage of the *~~w~~Work*. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

The Contractor shall not be entitled to receive any increase in the Contract Time or the Total Contract Price for suspensions which are: (1) made at the request of the Contractor for its own convenience; (2) attributable to circumstances caused by the Contractor or those for which the Contractor is responsible; (3) attributable to circumstances which reasonably could have been anticipated or avoided by the Contractor; (4) attributable to inclement weather conditions usually experienced at the Pproject site during the relevant time period; (5) attributable to circumstances otherwise anticipated in the Contract; (6) to the extent that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or (7) to the extent an equitable adjustment is made or denied under another provision of this Contract.

80-~~07~~9 DETERMINATION AND EXTENSION OF CONTRACT TIME.
The number of calendar days *allotted in the Contract Documents for Substantial Completion of the Work* ~~shall be~~ *is* stated in ~~the proposal~~ *GP-20, BID REQUIREMENTS AND CONDITIONS* ~~Contract~~ and shall be known as the Contract Time.

The Contract Time shall be adjusted only by a Contract Modification.

If the Contract Time requires extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

RCOs and Claims relating to Contract Time shall be made in accordance with applicable provisions of Section 40-4. A copy of any RCO or Claim for a Contract Time extension shall be delivered to the OAR. The Contractor shall take all steps reasonably possible to minimize the adverse impact of delay events on the Work.
The Work under this Contract is only a part of the Owner's construction program. As a result, Work under this Contract may be required to be completed by certain milestone dates set forth in the Contract Documents ("milestone dates") in order to interface with the work on other components of the Owner's construction program. The schedule for the Owner's construction program or the specification of milestone dates is not intended to take the place of complete Work scheduling by the Contractor, but is provided to show certain critical milestone dates for various phases of the Work on which the Contractor's Baseline Schedule or Progress Schedules must be based. There shall be no changes in the milestone dates, except by CO, FCO or CCD. In the event that the Contractor fails to complete any required portions of the Work by the milestone dates, the Contractor and its Surety shall be liable to the Owner for the Liquidated Damages identified in GP-20, in addition to all other obligations and liabilities under the Contract Documents and applicable law.. In the event that the Contractor completes any required portions of the Work ahead of the milestone dates or is precluded from doing so by acts of the Owner or third parties, the Contractor shall not be entitled to damages against the Owner for completing or failing to complete the Work earlier. There is no incentive payment for early completion of any milestone dates.

The Contractor shall cooperate with the OAR in order to maintain the progress of the Work in accordance with the Contractor's current accepted schedule and Contract Time requirements. In addition to the requirements of GP-80 regarding Progress Schedule updates, if the Owner or OAR determines that the Contractor is failing to maintain the progress of the Work, through no fault of the Owner, the Contractor must, within seventy-two (72) hours of written request of the OAR, submit a written response detailing the Contractor's plan of action to recover lost time in order to maintain the progress of the Work in accordance with the Contractor's current accepted schedule or Contract Time requirements. In such event, the Contractor shall comply with the OAR's written orders to take whatever steps are necessary to recover lost time and maintain the progress of the Work. These steps may include, but are not limited to, re-sequencing the Work activities, increasing the number of Contractor's shifts, workforce, supervision, work days, overtime operations, equipment resources, or expediting delivery of materials or equipment. Regardless of the manner in which the schedule is recovered, the Contractor shall not be entitled to additional compensation, such as for acceleration, for actions that relate to the recovery of the schedule, unless Owner written pre-approval for expedited shipping or delivery is obtained.

In addition to other remedies available to the Owner, if the Contractor fails to maintain the progress of the Work in accordance with the Contractor's current accepted schedule or Contract Time requirements, the Owner may, in its sole discretion, upon seven (7) days written notice to the Contractor and its Surety, order the Contractor to suspend or cease all or a portion of the Work and the Owner may demand that the Contractor's Surety prosecute all or a portion of the Work in accordance with the Contract Documents. Failure of the Surety to so perform within seven (7) days of receipt of such notice shall be grounds for the Owner to prosecute the Work at Surety's and Contractor's expense. The right of the Owner to issue such notice, under this Section, to insist on prosecution of the Work by the Contractor's surety, and for Owner to prosecute the Work itself shall not give rise to any duty on the party of the Owner to exercise those, or any

other, rights for the Contractor, the Surety, or any other person or entity.

80-10 DELAY TO CONTRACTOR

Notwithstanding any provision in the Contract to the contrary, If the Contractor is delayed in performance of the Work by any act or omission of the Owner, OAR or by any member, officer, employee, agent, servant, or representative of the Owner or OAR, or by any separate contractor or consultant engaged by the Owner or OAR, or by changes in the Work ordered by the Owner (as reflected in Contract Modifications), or by fire, or any unforeseen cause which the Contractor lacked any ability to control or manage, all of which occurred without any responsibility, fault or negligence on the part of the Contractor and, in the opinion of the Owner, neither could have been anticipated nor avoided by the Contractor, then the Contract Time shall be extended for an appropriate period of time to compensate the Contractor for the delay, which in no event shall exceed a day-for-day extension for the period of proven actual delay to the critical path as described above; provided that the Contractor has complied with the notice requirements of GP-50 and submitted full documentation supporting the request as set forth in GP-40. Neither labor disputes involving the Contractor, its Subcontractors or any other laborers or materialmen performing the Work, nor abnormal inclement weather conditions, shall be considered to be unforeseeable, unavoidable or unanticipated.

An extension of the Contract Time shall be the Contractor's sole and exclusive remedy for any delay of any kind or nature, except to the extent the delays were solely caused by (1) material acts or material omissions by the Owner or parties for whom the Owner bears responsibility constituting active interference or (2) concealed or unknown conditions as set forth in GP-50. For these delays, the Contractor is only entitled to the reasonable actual costs that are caused directly and solely by the delay and allowed for Contract Modifications as set forth in GP-40. The Owner's exercise of any of its rights or remedies, including, without limitation, ordering changes in the Work, or suspending, rescheduling or ordering correction of the Work, regardless of the extent or frequency of Owner's exercise of such rights or remedies, shall not be construed as active interference.

In no event, including circumstances in which it is alleged or proven that Owner intentionally interfered with the Contractor's performance of the Work, shall the Contractor be entitled to recover from the Owner, for itself or its Subcontractors, suppliers or other parties claiming a right or damage by or through Contractor, any of the following items or damages arising out of or related to this Contract or the breach thereof:

1. *loss of profits or anticipated profits*
2. *inefficiency or loss of productivity*
3. *acceleration costs not specifically agreed to in advance, in writing, by the Owner*
4. *home office overhead*
5. *any cost that is not specifically allowed by GP-40.*
6. *indirect, incidental, consequential or special damages, including but not limited to, loss of bonding capacity, loss of bidding or loss of business or contracting opportunities or other impact costs.*

80-~~08~~*11* FAILURE TO COMPLETE ON TIME.

For each calendar day ~~or working day, as specified in the Contract,~~ that any ~~work~~ *portion of the Work* remains uncompleted after *expiration of* the Contract Time (including all extensions and adjustments *in Contract Modifications,* ~~as provided in paragraph 80-09, DETERMINATION AND EXTENSION OF CONTRACT TIME~~ the sum specified in ~~the Contract and proposal~~ *GP-20* as Liquidated Damages ~~(LD)~~ *shall be paid by the Contractor or* will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of *the* damages ~~including but not limited to additional engineering services that will be incurred by~~ *to* the Owner *that are attributable to the delay* should the Contractor fail to complete the ~~w~~*Work* in the time provided in *the Contract. If the amount of the Liquidated Damages exceeds the amount otherwise due to the Contractor, the Contractor or the Contractor's Surety shall pay the Liquidated Damages to the Owner within thirty days or within the reasonable time as set forth in the notice of Liquidated Damages.* ~~their contract.~~

~~The maximum construction time allowed for Schedules [____] will be the sum of the time allowed for individual schedules but not more than [____] days. Permitting the Contractor to continue and finish the Work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a wavier on the part of the Owner of any of its rights under the Contract.~~

80-~~09~~12 DEFAULT AND TERMINATION OF CONTRACT.

The Contractor shall be considered in default of their Contract and such default will be considered as cause for the Owner to terminate the Contract, in whole or in part, for any of the following reasons, if the Contractor:

a. Fails to begin the work under the contract within the time specified in the "Notice to Proceed," or

b. Fails to perform the Work, *or fails to maintain adequate progress towards completion of the Work,* or fails to provide sufficient workers, equipment and/or materials to assure completion of Work in accordance with the terms of the Contract, or

c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such Work as may be rejected as unacceptable and unsuitable, or

d. Discontinues the execution of the Work, or

e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or

f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or

g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or

h. Makes an assignment for the benefit of creditors, or

i. Fails to carry out the requirements of the Owner's DBE Participation Program, or

j. If at any time the Surety executing the bond is determined by the Owner to be unacceptable and the Contractor fails to furnish an acceptable substitute Surety within ten (10) days after notice from the Owner. This ten (10) day notice and cure period is in lieu of the seven (7) day period set forth below, or

k. fails to fulfil the insurance requirements of General Provisions 70-25 or fails to remedy an insurance deficiency within a reasonable time as determined by the Owner, or

l. For contracts that exceed One Million Dollars ($1,000,000.00), Owner may terminate this Agreement if the Contractor is found to have submitted a false certification or has been placed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or

m. For any other cause whatsoever, fails to carry on the Work in an acceptable manner, or

n. For any other cause explicitly provided for in this Contract as a cause for termination.

Should the Owner or *OAR* consider the Contractor in default of the Contract for any reason above, the Owner shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons

for considering the Contractor in default and the Owner's intentions to terminate the Contract. *If the Owner terminates the Contract for one of the reasons stated above, the Contractor shall not be entitled to receive further payment until the terminated Work is completed.*

If the Contractor or Surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the ~~RPR~~ *OAR* of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the Contract, to take the execution of the *terminated* Work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the Work and are acceptable and may enter into an agreement for the completion of ~~said~~ *the terminated Work* ~~Contract~~ according to the terms and provisions *of the Contract* ~~thereof~~, or use such other methods as in the opinion of the ~~Engineer~~ *OAR* will be required for the completion of ~~said~~ *the terminated Work* ~~Contract~~ in an acceptable *manner, including, but not limited to accepting assignment of any or all Subcontracts and finishing the terminated Work by whatever reasonable method the Owner may deem necessary.* ~~manner.~~

If the Contractor is found to have submitted a false certification or has been placed on the Scrutinized Companies that Boycott Israel List or is engaged in a boycott of Israel, Owner may terminate this Contract for cause and without the opportunity to cure, or for Contracts of One Million Dollars ($1,000,000.00) or more, Owner may terminate this Contract for cause and without the opportunity to cure if the Contractor is found to have submitted a false certification or has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or is engaged in business operations in Cuba or Syria.

All costs and charges incurred by the Owner, together with the cost of completing the Work under *the* Contract, *including compensation for the Designer's and OAR's services and all other expenses made necessary thereby,* will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the Contract, then the Contractor and the Surety shall be liable and shall pay to the Owner the amount of such excess. *The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the OAR and this obligation for payment shall survive termination of the Contract. Termination of the Contract, or a portion thereof, shall neither relieve the Contractor of its responsibility for the completed Work nor shall it relieve its Surety of its obligation for and concerning any claim arising out of the Work performed. If only a portion of the Work is terminated, the Contractor shall continue to complete the remaining portions of the Work that were not terminated in accordance with Contract Documents.* The Contractor's obligations to the Owner arising from the Contractor's improper acts, omissions, or defaults shall survive the termination of this Contract. The duties and obligations imposed by the Contract and the rights and remedies available hereunder are in addition to, and not a limitation of, any duties, obligations, rights, and remedies otherwise imposed or available by law.

80-13 TERMINATION FOR CONVENIENCE.

a. *The Owner may, by written notice, terminate this Contract or the Work performed hereunder, in whole or in part at any time, for the Owner's convenience or because of failure to fulfill the Contract obligations. Such action will be without prejudice to any other right or remedy of Owner. Upon receipt of such notice, all services, work, and orders for materials or services associated with the terminated Work must be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in performing the terminated Work, whether completed or in progress, shall be delivered to the Owner.*

b. If the termination is for the convenience of the Owner, an equitable adjustment in the Contract price will be made the portion of the Work that was terminated as set forth in this Section, and, .the Contractor shall be paid for:

1. *the reasonable actual cost for the portion of all Work that was terminated and which was fully completed under the Contract and accepted by the Owner, based upon the approved Schedule of Values and/or Unit Price Schedule.*

2. *the reasonable actual cost for the portion of all Work that was terminated and which was fully completed under the Contract and accepted by the Owner, based upon the Contractor's Bid if the Bid contained line item pricing all or a portion of the terminated Work. The amount of equitable adjustment for such Work shall not exceed the Bid amount for that line item.*

3. *at the sole option of the Owner, the reasonable actual cost of acceptable materials or equipment obtained or ordered by the Contractor for the portion of the Work that was terminated prior to the date notice of Owner's termination for convenience is served and which are not incorporated in the Work, as shown by receipted bills and actual cost records at such points of delivery as may be designated by the Owner.*

4. *at the sole option of the Owner, the reasonable actual cost of bonafide irrevocable orders made for the portion of the Work that was terminated prior to the date notice of Owner's termination for convenience is served for materials and equipment but not yet delivered to the Project site. However, such materials and equipment must be delivered to the Owner to a site or location designated by the Owner prior to release of payment for such materials and equipment.*

Any request for equitable adjustment shall be subject to the limitations of GP-40 and supported by actual invoices, time sheets, and other documentation of the actual costs incurred. The Contractor shall substantiate its request for payment in accordance with the requirements of the Contract Documents.
There is no entitlement to anticipatory profits or revenue or other economic loss arising out of or resulting from Owner's termination, unless explicitly agreed to, in writing, by the Owner as part of a final Contract Modification that fully resolves all outstanding issues on the Project.

c. If the termination is due to failure to fulfill the Contractor's obligations, the Owner may take over the work and prosecute the same to completion by contract or otherwise. In such case, the Contractor is liable to the Owner for any additional cost occasioned to the Owner thereby.

d. If, after notice of termination for failure to fulfill Contract obligations, it is determined that the Contractor had not so failed, the termination will be deemed to have been effected for the convenience of the Owner. In such event, adjustment in the Contract price will be made as provided in paragraph b of this clause.

e. The rights and remedies of the Owner provided in this clause are in addition to any other rights and remedies provided by law or under this Contract. The Contractor shall proceed to complete any part of the Work, as directed by the Owner, and shall attempt to settle all Subcontractor/Supplier claims and obligations under the Contract with the Owner. Subject to the limitations in GP-40, the Contractor shall be compensated by the Owner for the Contractor's reasonable costs actually expended and profit earned on Work that has been fully completed and accepted by the Owner.

f. If only a portion of the Work is terminated, whether for convenience or for cause, the Contractor shall continue to complete the remaining portions of the Work that were not terminated in accordance with Contract Documents. Termination of the Contract, or a portion thereof, shall neither relieve the Contractor of its responsibility for the completed Work nor shall it relieve its Surety of its obligation for and concerning any claim arising out of the Work performed.

80-~~10~~*14* TERMINATION FOR NATIONAL EMERGENCIES.
The Owner shall terminate the ~~C~~contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President ~~with respect to the prosecution of war or in the interest of national defense~~.

When the Contract, or any portion thereof, is terminated before completion of all items of Work in the Contract, *compensation will be made per GP-80-13.* ~~payment will be made *(subject to the limitations of Section 40-04)* for the actual number of units or items of work completed at the Contract Price or as mutually agreed for items of Work partially completed or not started. No claims~~ or *for* ~~loss of anticipated profits shall be~~ considered ~~*permitted.*~~

~~Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.~~

~~Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the RPR *OAR.*~~

Termination of the ~~C~~contract or a portion thereof shall neither relieve the Contractor of his/her responsibilities for the completed work nor shall it relieve his/her surety of its obligation for and concerning any just claim arising out of the work performed.

80-~~11~~*15* WORK AREA, STORAGE AREA AND SEQUENCE OF OPERATIONS.
The Contractor shall obtain approval from the ~~RPR~~ *OAR* prior to beginning any work in all areas of the airport. No operating runway, taxiway, or Air Operations Area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate Work in accordance with the approved CSPP and SPCD. *All Contractor equipment and material stockpiles shall be stored outside the runway object free area or a minimum distance as shown on the plans from the centerline of an active runway. No equipment will be allowed to park within the approach area of an active runway at any time. No equipment shall be inside the runway object free area or within the distance shown on the Plans from an active runway at any time.*

END OF SECTION 80

SECTION 90 MEASUREMENT AND PAYMENT

90-01 MEASUREMENT OF QUANTITIES.

All work completed under the ~~C~~contract will be measured by the ~~RPR~~ *OAR*, or their authorized representatives, using United States Customary Units of Measurement or the International System of Units.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the ~~C~~contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the ~~RPR~~ *OAR*.

Unless otherwise specified, all ~~C~~contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

When requested by the Contractor and approved by the ~~Engineer~~ *OAR* in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the ~~RPR~~ *OAR* and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Measurement and Payment Terms

Term	Description
Excavation and Embankment Volume	In computing volumes of excavation, the average end area method will be used unless otherwise specified.
Measurement and Proportion by Weight	The term "ton" will mean the short ton consisting of 2,000 pounds (907 km) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, independently certified scales by competent, qualified personnel at locations designated by the ~~RPR~~ *OAR*. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the OAR directs, and each truck shall bear a plainly legible identification mark.
Measurement by Volume	Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.
Asphalt Material	Asphalt materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts. Net certified scale weights or weights based on certified volumes in the case of rail shipments will be

Term	Description
	used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities.
Cement	Cement will be measured by the ton (kg) or hundredweight (km).
Structure	Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
Timber	Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.
Plates and Sheets	The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.
Miscellaneous Items	When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
Scales	Scales must be tested for accuracy and serviced before use. Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end. Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the *OAR* before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed 0.1% of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted. In the event inspection reveals the scales have been "overweighing" (indicating more than correct weight) they will be immediately adjusted. All materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%. In the event inspection reveals the scales have been under-weighing (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded. Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the ~~RPR~~ *OAR* can safely and conveniently view them. Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment. All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.

Term	Description
Rental Equipment	Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the *Work*. Special equipment ordered in connection with extra work will be measured as agreed in the Change Order ~~or supplemental agreement~~ authorizing such work as provided in paragraph 90-11 PAYMENT FOR EXTRA WORK AND FORCE ACCOUNT WORK.
Pay Quantities	When the estimated quantities for a specific portion of the *Work* are designated as the pay quantities in the Contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the ~~RPR~~ *OAR*. If revised dimensions result in an increase or decrease in the quantities of such *Work*, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-02 SCOPE OF PAYMENT.
The Contractor shall receive and accept compensation provided for in the ~~C~~ontract as full payment for furnishing all materials, for performing all Work under the Contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the Work or the execution thereof, subject to the provisions of Section 70, paragraph 70-18, NO WAIVER OF LEGAL RIGHTS.

When the "basis of payment" subsection of a technical specification requires that the ~~C~~ontract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 TOTAL CONTRACT PRICE
The Total Contract Price is the amount stated in the Contract, Section 00 52 13, plus any adjustments included in a Contract Modification and is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

Notwithstanding anything to the contrary contained in the Contract Documents, the Owner may withhold any payment to the Contractor, if, and for so long as a good faith dispute exists, which may include the Contractor's failure to perform any of its obligations hereunder, in the Contractor's default under any of the Contract Documents or there is reasonable evidence indicating that the Work will not be completed within the Contract Time, as may be adjusted by Contract Modifications, and the unpaid balance would be insufficient to cover the anticipated Liquidated Damages; provided, however, that any such holdback shall be limited to an amount sufficient in the reasonable opinion of the Owner to cure any such default or failure of performance by the Contractor.

90-04 SCHEDULE OF VALUES
Before the first Application for Payment on lump sum contracts, including those which contain unit prices for certain portions of the Work, the Contractor shall submit to the Owner and OAR for approval, a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy and reasonableness (in relationship to actual costs) as the Owner or OAR may require. The Schedule of Values shall be prepared in such a manner that each major item of Work and each subcontracted item of Work is shown as a separate line item on the Owner's form of AIA Document G702, Application and Certificate for Payment, Continuation Sheet or other form acceptable to the OAR.

The Contractor's Schedule of Values must contain a separate line item for General Conditions which are defined as general overhead and administrative charges for onsite personnel, office space, and other costs included in the definition of mark-up in GP-40. The total amount for General Conditions must be reasonable in relationship to the Work and approved by the Owner and OAR. Payment for General Conditions shall be prorated according to the work-in-place (excluding stored materials) reported in the approved application for payment.

90-05 APPLICATION AND CERTIFICATE OF PAYMENT

The Contractor shall submit to the OAR two (2) original itemized Applications and Certificate for Payment for Work completed in accordance with the approved schedule of values or unit price schedule. Applications for Payment shall be submitted no later than the 5th of the month for all Work completed the prior month. Each Application and Certificate for Payment shall include only Work completed and/or costs incurred through the submission date of the Application and Certificate for Payment, but not previously invoiced. No payment will be made for Work not yet completed. Each Application and Certificate for Payment must clearly identify the submission date (a/k/a the "period ending date"). Each Application and Certificate for Payment shall be notarized and supported by such data required by the Contract Documents substantiating the Contractor's right to payment (such as copies of requisitions from Subcontractors and material Suppliers) and reflecting the amount of retainage in accordance with GP-90-06, unless otherwise provided in the Contract Documents or agreed to, in writing, by the Owner, at its sole discretion. The OAR shall be deemed the Owner's agent for purposes of Chapter 718, Florida Statutes. If an OAR is not assigned to this Project, the Owner will assign an agent or employee responsible for receiving and processing Applications and Certificates for Payment.

Each Application and Certificate for Payment shall contain unmodified Certifications stating the following:

"Contractor hereby certifies that, except as indicated on the attached documents, there are no claims of Contractor, its Subcontractors or Suppliers as of the date of this Application and Certificate for Payment that have not been completely resolved, that the Contractor has no knowledge of any unsolved claims by Subcontractors or Suppliers, that all Subcontractors and Suppliers have been paid to date from funds received for previous Applications and Certificates for Payment, that there is no known basis for the filing of any claim on the Work and Contractor, and upon receipt of funds due in this Application and Certificate for Payment, hereby releases the Owner from any claims arising from the Work, except for retainage. Contractor further certifies that the amounts contained in the Application and Certificate for Payment have been verified and are correct."

Upon request by the Owner, the Contractor shall submit waivers of lien/bond rights and other documentation from Subcontractors and Suppliers to evidence the status of payments.

Applications and Certificates for Payment may not include requests for payment of amounts the Contractor does not intend to pay to a Subcontractor or material Supplier because of a dispute or other reason.

Applications and Certificates for Payment may include requests for payment on account of changes in the Work which have been included in fully executed CCDs or FCOs and properly authorized COs that have been executed by the Contractor.

The failure to comply with the requirements of this Article may result in the withholding of approval of the Application for Payment until compliance is achieved.

Concurrent with the Contractor's submission of an Application and Certificate for Payment, the Contractor shall submit an updated Progress Schedule and make available for review and inspection by the Owner, Designer or OAR an updated version of the As-built Drawings, prepared in accordance with the

requirements of the Contract, reflecting all items of Work for which the Contractor is seeking payment. Failure to have the updated As-built Drawings available for review or to reflect items of Work on the updated As-built Drawings for which payment is sought may result in the Owner's withholding payment or partial payment from the Contractor until such time as properly updated As-built Drawings are prepared.

The Contractor warrants that title to all Work covered by an Application and Certificate for Payment will pass to the Owner no later than the time of payment on such Application and Certificate for Payment by the Owner to the Contractor, and that the Contractor shall retain all obligations under this Contract related to the Work, including but not limited to responsibility to adequately insure, maintain, secure and protect all Work and all materials and equipment related to the Work until the Work reaches Final Completion, including, but not limited to, adequately insuring, securing and protecting all such Work from weather damage. The Contractor further warrants that upon submittal of an Application and Certificate for Payment all Work for which Applications and Certificates for Payment have been previously executed and payments received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material Suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

90-06 CERTIFICATIONS FOR PAYMENT

Within fifteen (15) business days after the OAR's receipt of the Contractor's Application and Certificate for Payment, the Owner and OAR shall either (1) approve the Application and Certificate for Payment by signing the Application and Certificate for Payment in the appropriate places or (2) the OAR shall notify the Contractor in writing of reasons for withholding approval in whole or in part and the action necessary to make the Application and Certificate for Payment acceptable.

The OAR's execution of the Application and Certificate for Payment will constitute a representation by the OAR to the Owner, based upon the OAR's observations at the site and the data comprising the Application and Certificate for Payment, that the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract. The Contractor shall not rely upon these representations as the Owner's acceptance of the Work since they are made for payment purposes only and are subject to an evaluation of the Work for conformance with the Contract upon Substantial Completion, to results of subsequent tests and inspections, to minor deviations from the Contract correctable prior to completion and to specific qualifications expressed by the Designer or OAR. However, execution of the Application and Certificate for Payment is not a representation that the OAR has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work (2) reviewed construction means, methods, techniques, sequences or procedures (3) reviewed copies of requisitions received from Subcontractors and material Suppliers and other data requested by the Owner to substantiate the Contractor's right to payment or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Total Contract Price. The Contractor may not rely upon any Application and Certificate of Payment as approval and acceptance of the Work reflected thereon.

The Owner's signature on the Application for Payment does not constitute approval and acceptance of the Work.

At all times during the processing of an Application and Certificate for Payment, including resolution of any related disputes, the Contractor shall continue to expeditiously prosecute the Work.

The Owner shall make payment to the Contractor of the amount specified in the approved Application and Certificate for Payment (which shall provide for all applicable retentions, including, but not limited to the proper amount of retainage on all progress payments as provided for in the following paragraph), within twenty-five (25) business days from the date that the Application and Certificate for Payment is stamped as received by the OAR. If the payment has not been made within that time, Contractor may deliver an overdue

notice to the Owner. Within four (4) business days after receipt of the overdue notice, either payment shall be made or the OAR shall notify the Contractor in writing that the approval of the Application and Certificate for Payment has been withdrawn. Otherwise, in accordance with Section 218.735(1)(a), the payment request shall be deemed accepted, except for any portion of the request that is fraudulent or misleading. Payment by the Owner shall not constitute approval or acceptance of any item of cost in the Application for Payment. No partial payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or relieve the Contractor of any of its obligations hereunder.

Retainage

The Owner may withhold up to five percent (5%) of the payment certified as due to the Contractor as retainage. *After achieving Substantial Completion, the Contractor may request payment for the retainage; provided, however, the Owner shall continue to retain an amount equal to the estimated cost of completion of the punch list, in addition to any anticipated Backcharges, anticipated Liquidated Damages, and any other changes to the Work, as deemed necessary by the Owner it its sole discretion.*

The OAR may withhold approval of the Application and Certificate for Payment for the release of the retainage, if there is a good faith dispute, claim, or demand that exceeds the amount being withheld, as long as it complies with the notice requirement contained in GP-90-05.

90-07 DECISIONS TO WITHHOLD CERTIFICATION

The OAR may withhold approval, in whole or in part, to the extent reasonably necessary to protect the Owner, if the OAR cannot certify that the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents, or reasonably inferable therefrom. In addition, notwithstanding anything to the contrary contained in the Contract Documents, the Owner may withhold any payment to the Contractor, if, and for so long as a good faith dispute exists, which may include the Contractor's failure to perform any of its obligations hereunder; the Owner's assessment of Liquidated Damages; in the Contractor's default under any of the Contract Documents or if there is reasonable evidence indicating that the Work will not be completed within the Contract Time, as may be adjusted by Contract Modifications, and the unpaid balance would be insufficient to cover the anticipated Liquidated Damages; provided, however, that any such holdback shall be limited to an amount sufficient in the reasonable opinion of the Owner to cure any such default or failure of performance by the Contractor. The OAR may withhold approval, in whole or in part, to the extent reasonably necessary to pay any expense or cost, or remedy any injury incurred by Owner arising out of any default or neglect by Contractor, or otherwise attributable to the Contractor ("Backcharge"). Any such Backcharge (after processing an appropriate Change Order, Construction Change Directive, or other appropriate process determined by Owner) may be deducted by Owner from payments then or thereafter due the Contractor, or from the final payment otherwise due the Contractor. In addition, if the Owner or OAR subsequently discovers that an Application for Payment was improperly paid, the Owner or OAR may withhold payment on any future Applications for Payment, in whole or in part, to the extent necessary to recover the funds improperly paid. In addition, notwithstanding anything to the contrary contained in the Contract Documents, in the event the Owner determines that the Contractor has failed to comply with any prevailing wage requirement, the Owner may withhold all payments until compliance is properly certified by the Contractor and verified to the Owner's satisfaction. If the Owner determines that the reasons for withholding payment no longer exist, the Owner will so notify the Contractor and will make payment for the amount of the holdback within ten (10) business days.

Upon notification that an Application and Certificate for Payment is not approved, the Contractor and the OAR shall conduct discussions to determine whether a revised Application and Certificate for Payment can be agreed upon. If no agreement is reached within ten (10) business days after notification, the OAR or

Owner will adjust the original Application and Certificate for Payment to delete the disputed amounts and will then approve payment for the undisputed amount and send a copy of the adjusted Application and Certificate for Payment to the Contractor. If an agreement can be reached on the disputed portions of the Application within ten (10) days, the Contractor will submit a revised and signed Application and Certificate for Payment for the agreed amount, if any, to the OAR and Owner for approval. Payment will be made within ten (10) business days after the Owner's approval of the revised Application and Certificate for Payment.

90-08 CONTINUED PERFORMANCE PENDING PAYMENT

The Owner's obligation to make timely payments and the Contractor's obligations to diligently prosecute the Work shall continue uninterrupted during the pendency of any bona fide dispute between the Owner and the Contractor.

90-~~03~~*09* COMPENSATION FOR ALTERED QUANTITIES.

When the accepted quantities of work vary from the quantities in the ~~proposal~~ *Bid*, the Contractor shall accept as payment in full, so far as Ceontract items are concerned, payment at the original Ceontract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in Section 40, paragraph 40-03, ALTERATION OF WORK AND QUANTITIES, will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from their own unbalanced allocation of overhead and profit among the Ceontract items, or from any other cause.

90-~~04~~*10* PAYMENT FOR OMITTED ITEMS.

As specified in Section 40, paragraph 40-05, OMITTED ITEMS, the ~~RPR~~ *Owner or the OAR* shall have the right to omit from the work (order nonperformance) any Ceontract item, except major contract items, in the best interest of the Owner.

Should the ~~RPR~~ *Owner or the OAR* omit or order nonperformance of a Ceontract item or portion of such item from the work, the Contractor shall accept payment in full at the Ceontract prices for any work actually completed and acceptable prior to the ~~RPR's~~ Owner or *OAR's* order to omit or non-perform such Ceontract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the ~~RPR's~~ Owner or *OAR's* order *to omit* will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted Ceontract item prior to the date of the ~~RPR's~~ *Owner or OAR's* order. Such additional costs incurred by the Contractor must be directly related to the deleted Ceontract item, ~~and~~ shall be supported by certified statements by the Contractor as to the nature the amount of such costs and shall comply with requirements for compensation as defined in GP-80.

90-~~05~~*11* PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK.

Extra Work, performed in accordance with the subsection titled EXTRA WORK of GP 40, will be paid for at the Contract prices or agreed prices specified in the Contract Modification. When the Contract Modification authorizing the Extra Work requires that it be done by force account, such force account shall be measured and paid for based on expended labor, equipment, and materials, plus an allowance for overhead and profit, as set forth in GP 40-04.

~~***90-06 PARTIAL PAYMENTS***~~

~~Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the RPR, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with paragraph 90-07, PAYMENT FOR MATERIALS ON HAND. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.~~

~~It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the RPR to be a part of the final quantity for the item of work in question.~~

~~No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in paragraph 90-15, ACCEPTANCE AND FINAL PAYMENT.~~

~~The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.~~

90-12 SUBCONTRACTOR PAYMENTS

Prompt Payment (§26.29)- The Contractor agrees to pay each Subcontractor under this Contract for satisfactory performance of its contract no later than ten (10) days from the receipt of each payment the Contractor receives from the Owner. The Contractor agrees further to return retainage payments to each Subcontractor within 10 days after the Subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Owner. This clause applies to both DBE and non-DBE Subcontractors. Contractor shall submit proof of payment of DBE subcontractors to Owner's Small Business Development Department within 30 days of payment either in the form of cancelled checks or ACH payments or other form acceptable to the Owner.

The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors within seven (7) days after receipt of payment from the Subcontractor,

Neither Owner, OAR, nor Designer shall have any obligation to pay or cause the payment of money to a Subcontractor or Supplier for Work. If required by the Owner, within fifteen (15) business days of receipt of payment from the Owner, the Contractor shall send to the Owner copies of checks paid for all items of the Contractor's costs listed in the Application for Payment that were not paid prior to the date on which the Application for Payment was submitted.

If the Contractor fails to pay a Subcontractor or Supplier within ten (10) days of receipt of funds from the Owner, then the Owner may, at its option, following a request from the unpaid Subcontractor or Supplier, pay such Subcontractor or Supplier the applicable sums paid the Contractor on account of the Subcontractor's work or Supplier's materials, and deduct such sums from any monies due the Contractor in the future unless the Contractor can furnish information satisfactory to the Owner that the payment should not be made and Contractor is actively taking steps to resolve a dispute, if applicable. The Owner may, but is under no obligation to, communicate with a Subcontractor or Supplier in attempts to resolve allegations of delayed payments. The Owner's options in this paragraph are in addition to any other rights set forth in the Contract.

At any time, the Contractor may request payment from Owner for Subcontractor's retainage. At the time such retainage is requested, Contractor must provide Owner with a Final Release Form from each Subcontractor for which retainage payments are requested. Any early reduction of a portion of retainage shall have no effect on Contractor's warranty and other obligations that are preliminary to Substantial or Final Completion. Contractor shall remain liable to Owner for all items of work in accordance with the Contract Documents notwithstanding any early release of Contractor's retainage.

Sub-subcontractor Payments

If any Subcontractor fails to pay any Sub-subcontractor within seven (7) days of receipt of funds from the Contractor, then the Owner may, at its option, following a request from the unpaid Sub-subcontractor, pay such Sub-subcontractor, the applicable sums paid the Contractor on account of the Sub-subcontractor's work, and deduct such sums from any monies due the Contractor in the future unless the Contractor can furnish information satisfactory to the Owner that the payment should not be made and Contractor is actively taking steps to resolve a dispute, if applicable. The Owner's options in this paragraph are in addition to any other rights set forth in the Contract.

Upon satisfactory completion of each Sub-subcontractor's work, the Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to pay each Sub-subcontractor's retainage within seven (7) days after payment from the Contractor is received.

At any time, the Contractor may request payment from Owner on behalf of any Subcontractor for any Sub-subcontractor's retainage. At the time such retainage is requested, Contractor must provide Owner with a Final Release Form from the Sub-subcontractor for which retainage payments are requested. Any early reduction of a portion of retainage shall have no effect on Contractor's warranty and other obligations that are preliminary to Substantial or Final Completion. Contractor shall remain liable to Owner for all items of work in accordance with the Contract Documents notwithstanding any early release of Contractor's retainage.

The Owner may, however, demand sworn statements of accounts from Subcontractors or Suppliers and, at the Owner's sole discretion, pay Subcontractors or Suppliers by joint checks or directly for those amounts agreed by the Contractor as due and owing. In such event, the Contractor agrees any such payments shall be treated as a direct payment to the Contractor's account.

Contractor shall include in all subcontracts language providing that Contractor and Subcontractor will resolve payment disputes by alternative dispute resolution mechanisms. Contractor shall promptly take the initiative to commence such resolution process if Contractor has withheld a payment to a Subcontractor for cause that is disputed by Subcontractor. Contractor shall make every effort to resolve such payment disputes with its Subcontractors quickly and in a reasonable manner, so as not to delay the Work. The Contractor shall also require all Subcontractors to include in the Sub-subcontractor Agreements language providing that payment disputes will be resolved through alternative dispute resolution mechanisms and that every effort to resolve such payment disputes will be resolved quickly and in a reasonable manner, so as not to delay the Work.

90-~~07~~*13* PAYMENT FOR MATERIALS ON HAND.

At the Owner's sole discretion, ~~Partial~~ payment may be made *for the cost* of materials *or equipment* to be incorporated in the *W*ork, provided that such materials meet the requirements of the Contract, plans, and specifications and are delivered to *and suitably stored* at *a location approved by* the Owner, *in its sole discretion. Payment for materials on hand will be limited to the actual cost of the equipment or material as documented by invoices, excluding all other costs such as shipping, handling, and storage.*Such delivered costs of stored or stockpiled materials may be included in the next payment *application only* after *all of* the

following conditions are met:

a. The material has been stored or stockpiled in a manner acceptable to the *OAR* at or on an approved site.

b. The Contractor has furnished the ~~RPR~~ *OAR* with acceptable evidence of the quantity and quality of such stored or stockpiled materials.

c. The Contractor has furnished the ~~RPR~~ *OAR* with satisfactory evidence that the material and transportation costs have been paid. ~~The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material stored or stockpiled.~~

d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material stored or stockpiled.

e. The Contractor has furnished the Owner evidence that the material stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

f. The value of the materials or equipment must exceed $10,000.

g. The materials must not be scheduled to be incorporated into the Work within sixty (60) days, unless otherwise allowed by Owner.

It is understood and agreed that the *Contractor shall furnish to the Owner legal title (free if liens or encumbrance of any kind) to the material stored or stockpiled and that the* transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of their responsibility for furnishing and placing such materials in accordance with the requirements of the Contract, plans, and specifications.

In no case will the amount of payments for materials on hand exceed the Contract price for such materials or the Contract price for the Contract item in which the material is intended to be used.

No payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the payment of stored or stockpiled materials in accordance with the provisions of this paragraph.

Payment for such stored items shall be conditioned upon the following information and documentation being obtained by Contractor and provided to Owner:

Inventory schedule detailing the specific type of stored materials for which payment is requested, including but not limited to, quantities, types and sizes;

Invoices evidencing the costs of such stored materials, attached as back-up documentation to the Application for Payment under which payment for stored materials is sought;

A bill of sale, invoice or other documentation evidencing that the Owner has received the stored items free and clear of all claims and liens. This evidence shall be submitted to the Owner in Contractor's next pay application; Failure to comply with this requirement may result in the Owner withholding payment until the evidence is furnished;

A consent of surety for the Owner's payment for such stored items;

A certificate of insurance evidencing that stored materials not located on the Owner's property, are insured for the full replacement value of the stored materials for which payment is requested. Failure of the Contractor to obtain and maintain insurance coverages required herein shall give rise to a breach of this Contract, thereby allowing Owner all recourse permitted by law, including recovery under the payment and performance bonds posted for this Project.

Contractor agrees to separately mark and identify the stored materials with the Project name and name of the Contractor. All such stored materials shall be made available for Owner's periodic inspections. Contractor shall be responsible for all loss or damage to such stored materials arising from theft, malicious mischief or vandalism until Substantial Completion is achieved. Contractor assumes all risk of transit with respect to such stored materials.

If so requested by the Owner, the Contractor shall submit, within 30 days after the date of commencement of the Work and thereafter as the Owner requires, material delivery schedules for each category or subcontract for which application for payment for stored materials will be made, which schedules shall include items, quantities, value or unit prices with extensions and the month in which Application for Payment with respect thereto is expected to occur. Schedules shall be updated on a monthly basis and submitted as an attachment to the Contractor's Application for Payment. The Owner has no obligation to pay the Contractor if the updated monthly schedule is not provided.

The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment on such Application for Payment by the Owner to the Contractor, and that the Contractor shall retain all obligations under this Contract related to the Work, including but not limited to responsibility to adequately insure, maintain, secure and protect all Work and all materials and equipment related to the Work until the Work reaches Final Completion, including but not limited to, adequately insuring, securing and protecting all such Work and materials and equipment related to the Work from weather damage. The Contractor further warrants that upon submission of an Application for Payment, all Work for which Certifications for Payment have been previously executed or all Work for which payments have been received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material Suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

~~**90-08*14* PAYMENT OF WITHHELD FUNDS.**~~

~~At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in paragraph 90-06 PARTIAL PAYMENTS, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:~~

~~a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.~~

~~b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.~~

~~c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.~~

~~d. The Contractor shall obtain the written consent of the surety to such agreement.~~

90-~~09~~14 ACCEPTANCE AND FINAL PAYMENT.

When the Contract *W*ork has been accepted in accordance with the requirements of Section 50, paragraph 50-26, FINAL ACCEPTANCE, the ~~RPR~~ *OAR* will prepare the final estimate of the items of *W*ork actually performed. The Contractor shall approve the ~~RPR's~~ *OAR* final estimate or advise the ~~RPR~~ *OAR* of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the Contract as amended by an approved Contract Modification.. The Contractor and the ~~RPR~~ *OAR* shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the ~~RPR's~~ *OAR's* final estimate. *If agreement is reached on the final quantities, Owner shall process a final quantity adjustment Change Order to define the final Contract Price.* If, after such 30-day period, a dispute still exists, the ~~Contractor may approve he RPR's OAR's estimate under protest of the quantities in dispute, and such~~ disputed quantities shall be considered by the Owner as a ~~c~~*Claim* in accordance with Section 50, paragraph 50-27, CLAIMS FOR ADJUSTMENT AND DISPUTES *and the Owner shall process a Construction Change Directive to adjust the final quantities per the OAR's estimate to allow payment for all undisputed amounts.*

After the Contractor has *executed the final quantity adjustment Change Order based on* ~~approved, or approved under protest,~~ the ~~RPR's~~ *OAR's* final estimate, and after the *OAR's* receipt of the project closeout documentation required in paragraph 90-17, ~~CONTRACTOR FINAL PROJECT DOCUMENTATION~~ *PROJECT CLOSEOUT and a Final Application for Payment*, final payment will be processed based on the ~~entire sum~~ *Total Contract Price, including all approved Contract Modifications. If the Contractor has disputed the OAR's estimate of final quantities, after the Contractor's receipt of a fully executed Construction Change Directive based on the OAR's final quantity estimate and the OAR's* receipt of the project closeout documentation required in paragraph 90-17 *and an Application for Payment for* ~~or~~ the undisputed ~~sum in case of approval under protest,~~ *amount* determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the Contract will be processed. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a ~~c~~ Claim for additional compensation under the provisions of Section 50, paragraph 50-27, CLAIMS FOR ADJUSTMENT~~S~~ AND DISPUTES, or under the provisions of this paragraph, such ~~c~~*Claims* will be considered by the Owner in accordance with local laws or ordinances and this Contract. Upon final adjudication of such ~~c~~*Claims*, any additional payment determined to be due the Contractor will be paid pursuant to a ~~supplemental~~ final *Change Order.* ~~estimate.~~

FINAL COMPLETION AND FINAL PAYMENT

Final ~~C~~ompletion shall be achieved by the Contractor within the number of days after Substantial Completion specified GP-20-03, unless otherwise required in the Contract Documents. Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the OAR and Designer will promptly make such inspection with the Contractor and, when the OAR and Designer finds the Work acceptable under the Contract Documents and the Contract fully performed, including the delivery of all close-out documentation required below, the OAR will promptly certify a final Application and Certificate for Payment. Contractor's submittal of the final Application and Certificate for Payment is Contractor's certification that, to the best of their knowledge, information and belief, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the amount noted in the final Certification for Payment has been earned, subject to the Owner's claims, Liquidated Damages or Backcharges, if any. The OAR's execution of the final Application and Certificate for Payment will constitute a further representation to the Owner that the conditions precedent to the Contractor's being entitled to final payment have been fulfilled.

Neither final payment nor final retainage shall become due until the Contractor submits to the OAR all close-out documentation, which is defined as all of the following: (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work have been paid or

otherwise satisfied; (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days prior written notice has been given to the Owner; (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents; (4) consent of surety, if any, to final payment; (5) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner; (6) all required As-built Drawings, operating and maintenance instructions and manuals, and acceptable warranty/guaranty documents; (7) Subcontractor Final Release Forms; and (8) Final Release Form. If a Subcontractor refuses to furnish the release required by the Owner, the Owner may retain all money that the Owner may be compelled to pay in discharging such claim, including all costs and reasonable attorneys' fees. However, the Owner may elect not to retain any monies if the Contractor certifies that it is proceeding diligently and in good faith to resolve its dispute with the Subcontractor in accordance with the Subcontract Dispute Resolution Process and the Contractor's Surety consents to the Owner's payment to the Contractor despite such claim.

Acceptance of final payment shall constitute a waiver of all claims by the Contractor, Subcontractor or Supplier, except those Claims previously made in accordance with GP-50 and identified by the Contractor as unsettled on the final Application for Payment.

90-~~10~~15 CONSTRUCTION WARRANTY

a. In addition to any other warranties in this Ceontract, the Contractor warrants that *all* work performed under this Ceontract conforms to the Ceontract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of one year from the date or final acceptance of the W~~w~~ork, except as noted. If the Owner takes possession of any part of the W~~w~~ork before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the ~~project~~ W~~w~~ork.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal property, when that damage is the result of the Contractor's failure to conform to Contract requirements; or any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Owner will notify the Contractor, in writing, ~~within seven (7) days~~ after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within 14 days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this Contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.

h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

90-~~11~~*16* CONTRACTOR FINAL PROJECT DOCUMENTATION.
Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the ~~RPR~~ *OAR* approves the Contractor's final submittal. The Contractor shall, *in addition to the requirements of GP 90-15*:

a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.

b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

c. Complete final cleanup in accordance with subsection 40-10, FINAL CLEANUP.

d. Complete all punch list items identified during the Final Inspection.

e. Provide complete release of all claims for labor and material arising out of the Contract.

f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.

g. When applicable per state requirements, return copies of sales tax completion forms.

h. Manufacturer's certifications for all items incorporated in the work.

i. All required record drawings, as-built drawings or as-constructed drawings.

j. Project Operation and Maintenance (O&M) Manual.

k. Security for Construction Warranty.

l. Equipment commissioning documentation submitted, if required.

END OF SECTION 90

SPECIAL PROVISIONS - 1
FEDERAL CONSTRUCTION CONTRACT CLAUSES AT AIRPORT FACILITIES

1.0 DBE CONTRACT ASSURANCE (49 CFR § 26.13)

1.1 The Contractor or Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of Department of Transportation-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the Owner deems appropriate, which may include, but is not limited to:

1) Withholding monthly progress payments;
2) Assessing sanctions;
3) Liquidated damages; and/or
4) Disqualifying the Contractor from future bidding as non-responsible.

1.2 The Contractor or Subcontractor shall not discriminate on the basis of race, creed, color, national origin, sex, age or disability in the performance of this Contract. The Contractor agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the acts, the regulations, and this paragraph. This Contract is subject to and the Contractor shall comply with all applicable nondiscrimination authorities, which are hereby incorporated herein, including but not limited to:

- *Civil Rights Act of 1964, Title VI (78 Stat. 252, 42 USC 200d to 2000d-4 and 49 CFR Part 21)*
- *Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246), as amended;*
- *Americans with Disabilities Act of 1990, as amended, (42 U.S.C. § 12101 et seq.);*
- *Age Discrimination Act of 1975 - 42 U.S.C. 6101, et seq.;*
- *American Indian Religious Freedom Act, P.L. 95-341, as amended;*
- *41 CFR Part 60 – Equal Opportunity;*
- *49 CFR Part 26 – Disadvantaged Business Enterprise Program;*
- *49 CFR Part 27 – Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance;*
- *49 CFR Part 28 – Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities conducted by the Department of Transportation;*
- *28 CFR §50.3 – United States Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1974;*
- *49 CFR Part 21 – Nondiscrimination in federally-assisted programs of the Department of Transportation – effectuation of Title VI of the Civil Rights Act of 1964;*
- *Rehabilitation Act of 1973 – 29 USC 794;*
- *Architectural Barriers Act of 1968 – 42 USC 4151 et seq.;*
- *Title 49, USC subtitle VII, as amended;*
- *Executive Order 12898 – Environmental Justice; and*
- *49 CFR Part 37 – Transportation Services for Individuals with Disabilities (ADA).*

2.0 CONTRACTS IN EXCESS OF $50,000.00

.1 For contracts of $50,000.00 or more, a contractor having 50 or more employees, and his subcontractors having 50 or more employees and who may be awarded a subcontract of $50,000.00 or more, will be required to maintain an affirmative action program within 120 days of the commencement of contract.

2.1 ADDITIONAL NOTICES FOR $1,000,000.00 CONTRACTS

.1 Pre-award Equal Opportunity Compliance Reviews – Where the Bid of the apparent low responsive Bidder is in the amount of $1,000,000.00 or more, the Bidder and his known all-tier Subcontractors which will be awarded subcontracts of $1,000,000.00 or more will be subject to full on-site, pre-award equal opportunity compliance reviews before the award of the Contract for the purpose of determining whether the Bidder and his Subcontractors are able to comply with the provisions of the Equal Opportunity Clause.

.2 Within 30 days after award of this Contract, the Contractor shall file a compliance report (Standard Form 100) if:

.1 The Contractor has not submitted a complete compliance report within 12 months preceding the date of award; and

.2 The Contractor is within the definition of "employer" in Paragraphs 2(e)(3) of the instruction included in Standard Form 100.

.3 The Contractor shall require the Subcontractor on all-tier subcontracts, irrespective of dollar amount, to file Standard Form 100 within 30 days after award of the subcontract if the above two conditions apply. Standard Form 100 will be furnished upon request.

3.0 STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (41 CFR 60-4.3)

.1 As used in these specifications:

.a "Covered area" means the geographical area described in the solicitation from which this Contract resulted;

.b "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;

.c "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;

.d "Minority" includes:

.(1) Black (all) persons having origins in any of the Black African racial groups not of Hispanic origin);

.(2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race);

.(3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

.(4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

.2 *Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this Contract resulted.*

.3 *If the Contractor is participating (pursuant to 41 CFR 60 4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors shall be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.*

.4 *The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through 7p of these specifications. The goals set forth in the solicitation from which this Contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.*

.5 *Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.*

.6 *In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees shall be employed by the Contractor during the training period and the Contractor shall have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees shall be trained pursuant to training programs approved by the U.S. Department of Labor.*

.7 *The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:*

.a *Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.*

.b *Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.*

.c *Maintain a current file of the names, addresses, and telephone numbers of each minority and female off the street applicant and minority or female referral from a union, a recruitment source, or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the Contractor may have taken.*

.d *Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or female sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.*

.e *Develop on the job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.*

.f *Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.*

.g *Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with onsite supervisory personnel such a superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.*

.h *Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other contractors and subcontractors with whom the Contractor does or anticipates doing business.*

.i Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

.j Encourage present minority and female employees to recruit other minority persons and women and, where reasonable provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

.k Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60 3.

.l Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

.m Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

.n Ensure that all facilities and company activities are nonsegregated except that separate or single user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

.o Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

.p Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

.8 Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

.9 A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally,) the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

.10 The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

.11 The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

.12 The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

.13 The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60 4.8.

.14 The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

.15 Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

4.0 CONTRACTUAL REQUIREMENTS PURSUANT TO CIVIL RIGHTS ACT OF 1964, TITLE VI (49 CFR PART 21)

During the performance of this Contract, the Contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

.1 Compliance with Regulations. The Contractor shall comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities (identified herein), as they may be amended from time to time which are herein incorporated in full by reference and made a part of this Contract.

.2 Nondiscrimination. The Contractor, with regard to the work performed by it during the Contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of Subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the

discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the Contract covers any activity, project, or program set forth in Appendix B of49 CFR Part 21. The Owner may from time to time adopt additional or amended nondiscrimination provisions concerning this Contract, and the Contractor agrees that it will adopt and be bound by any such requirements as a part of this Contract.

.3 *Solicitations for Subcontracts, Including Procurements of Materials and Equipment. In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential Subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this Contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.*

.4 *Information and Reports. The Contractor shall provide all information and reports required by the Nondiscrimination Acts and Authorities, Acts, the Regulations and directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Owner or the Federal Aviation Administration (FAA) to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities, Acts, Regulations, orders, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the Owner or the FAA, as appropriate, and shall set forth what efforts it has made to obtain the information.*

.5 *Sanctions for Noncompliance. In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the Owner shall impose such contract sanctions as it or the FAA may determine to be appropriate, including, but not limited to:*

- .a *Withholding of payments to the Contractor under the Contract until the Contractor complies, and/or*
- .b *Cancellation, termination, or suspension of the Contract, in whole or in part.*

.6 *Incorporation of Provisions. The Contractor shall include the provisions of paragraphs 4.1 through 4.6 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Nondiscrimination Acts and Authorities, Acts, Regulations, or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as the Owner or the FAA may direct as a means of enforcing such provisions including sanctions for noncompliance, Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or supplier as a result of such direction, the Contractor may request the Owner to enter into such litigation to protect the interests of the Owner and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.*

5.0 GENERAL CIVIL RIGHTS PROVISION.

The Contractor agrees that it will comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the Contractor, Subcontractors, and sub-tier contractors from the bid solicitation period through the completion of the Contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

6.0 EQUAL EMPLOYMENT OPPORTUNITY CLAUSE (41 CFR PART 60 1.4(b))
During the performance of this Contract, the Contractor agrees as follows:

.1 *The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.*

.2 *The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.*

.3 *The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.*

.4 *The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.*

.5 *The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.*

.6 *In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedure authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.*

.7 *The Contractor will include the portion of the sentence immediately preceding paragraph 1 and the provisions of paragraphs 1 through 7 in every Subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions*

will be binding upon each Subcontractor or vendor. The Contractor will take such action with respect to any Subcontract or purchase order as the administering agency may direct as a means of enforcing such provision, including sanctions for noncompliance: Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or vendor as a result of such direction by the administering agency the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

.8 *This clause must be included in any subcontract that exceeds $10,000.*

7.0 VETERANS PREFERENCE.

In the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to Vietnam era veterans , Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans and small business concerns owned and controlled by disabled veterans as defined in Section 47112 of Title 49, United States Code. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

8.0 SUBCONTRACTS.

The Contractor shall insert in each subcontract the provisions contained in this General Provisions Section 130 and require the subcontractors to include these provisions in any lower tier subcontracts, together with a clause requiring this insertion in all lower tier subcontracts.

9.0 BUY AMERICAN – IRON, STEEL AND MANUFACTURED PRODUCTS FOR CONSTRUCTION CONTRACTS (49 USC Chapter 50101)

The Contractor agrees to comply with 49 USC §50101 (the "Buy American Requirements"), which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP-funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list. The Contractor is responsible for ensuring that lower-tier Subcontractors are also in compliance with the Buy American Requirements.

A bidder must submit the appropriate Buy America certification (herein) with all bids on AIP funded projects. Bids that are not accompanied by a completed Buy America certification will be rejected as nonresponsive.

Type of Certification is based on Type of Project:
There are two types of Buy American certifications.

- *For projects for a facility, the Certificate of Compliance Based on Total Facility (Terminal or Building Project) must be submitted.*
- *For all other projects (Non-building construction projects such as runway or roadway construction; or equipment acquisition projects), the Certificate of Compliance for Manufactured Products, Equipment and Materials Used on the Project must be submitted.*

10.0 ACCESS TO RECORDS AND REPORTS.

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Owner, the FAA, and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to the specific contract for the purposes of making audit, examination, excerpts, and transcriptions.

The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed. (2 CFR 200.36 and 2 CFR 200.333). The Contractor shall insert this provision into any lower tier contract.

11.0 RIGHTS TO INVENTIONS.

All rights to inventions and materials generated under this Contract are subject to requirements and regulations issued by the FAA and the Owner of the Federal grant under which this Contract is executed. (2 CFR § 200, Appendix II (F)).

12.0 AIRPORT AND AIRWAY IMPROVEMENT PROGRAM PROJECT. FEDERAL GOVERNMENT IS NOT A PARTY.

The Work in this contract is included in Airport Improvement Project No. BP-S00195, TERM C, PH 1 - AIRSIDE CONCOURSE which is being undertaken and accomplished by Owner in accordance with the terms and conditions of a grant agreement between the Owner and the United States, under the Airport and Airway Improvement Act of 1982 (P.L. 97-248) as amended by the Airport and Airway Safety and Capacity Expansion Act of 1987 (P.L. 100-223) and Part 152 of the Federal Aviation Regulations (14 CFR Part 152), pursuant to which the United States has agreed to pay a certain percentage of the costs under those Acts. The United States is not a party to this contract and no reference in this contract to the FAA or any representative thereof, or the United States, by the Contract, makes the United States a party to this Contract.

13.0 CONVICT LABOR.

No convict labor may be employed under this Contract.

14.0 COPELAND "ANTI-KICKBACK" ACT.

Contractor must comply with the requirements of the Copeland "Anti-Kickback" Act (18 U.S.C. 874 and 40 U.S.C. 3145), as supplemented by Department of Labor regulation 29 CFR Part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the Owner a weekly statement on the wages paid to each employee performing on covered work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

15.0 RESTRICTIONS ON FEDERAL PUBLIC WORKS PROJECTS - CERTIFICATION (49 C.F.R. § 30.13).

(a) Definitions. The definitions pertaining to this provision are those that are set forth in 49 CFR 30.7–30.9.
(b) Certification. By signing this solicitation or by the submission of a Proposal, the Proposer certifies that with respect to this solicitation, and any resultant contract, the Proposer—

(1) Is not a contractor of a foreign country included on the list of countries that discriminated against U.S. firms published by the Office of the United States Trade Representative (U.S.T.R.);

(2) Has not entered into any contract or subcontract with a subcontractor of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.; and

(3) Has not entered into any subcontract for any product to be used on the Federal public works project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

(c) Applicability of 18 U.S.C. 1001. This certification in this solicitation provision concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.
(d) Notice. The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
(e) Restrictions on contract award. No contract will be awarded to an offeror
(1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or
(2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such U.S.T.R. list or
(3) who incorporates in the public works project any product of a foreign country on such U.S.T.R. list; unless a waiver to these restrictions is granted by the President of the United States or the Secretary of Transportation. (Notice of the granting of a waiver will be published in the Federal Register.)
(f) System. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (b) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
(g) Subcontracts. The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this solicitation provision, including this paragraph (g), in each solicitation issued under such contract.

15.1 RESTRICTIONS ON FEDERAL PUBLIC WORKS PROJECTS (49 C.F.R. § 30.15).
(a) Definitions. The definitions pertaining to this clause are those that are set forth in 49 CFR 30.7–30.9.
(b) General. This clause implements the procurement provisions contained in the Continuing Resolution on the Fiscal Year 1988 Budget, Public Law No. 100–202, and the Airport and Airway Safety and Capacity Expansion Act of 1987, Public Law No. 100–223.
(c) Restrictions. The Contractor shall not knowingly enter into any subcontract under this contract:
(1) with a subcontractor of a foreign country included on the list of countries that discriminate against U.S. firms published by the United States Trade Representative (U.S.T.R.); or
(2) for the supply of any product for use on the Federal Public works project under this contract that is produced or manufactured in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.
(d) Certification. The Contractor may rely upon the certification of a prospective subcontractor that it is not a subcontractor of a foreign country included on the list of countries that discriminates against U.S. firms published by the U.S.T.R. and that products supplied by such subcontractor for use on the Federal public works project under this contract are not products of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R., unless the contractor has knowledge that the certification is erroneous.
(e) Erroneous certification. The certification in paragraph (b) of the provision entitled "Restriction on Federal Public Works Projects—Certification," is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the Contractor knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may cancel this contract for default at no cost to the Government.
(f) Cancellation. Unless the restrictions of this clause are waived as provided in paragraph (e) of the provision entitled "Restriction on Federal Public Works Projects—Certification," if the Contractor knowingly enters into a subcontract with a subcontractor that is a subcontractor of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or that supplies any product for use on the Federal public works project under this contract of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R., the Contracting Officer may cancel this contract for default, at no cost to the Government.
(g) Subcontracts. The Contractor shall incorporate this clause, without modification, including this paragraph (g) in all solicitations and subcontracts under this contract:

Certification Regarding Restrictions on Federal Public Works Projects—Subcontractors
(1) The Offeror/Contractor, by submission of an offer and/or execution of a contract certifies that the Offeror/Contractor is

(i) not an Offeror/Contractor owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the United States Trade Representative (U.S.T.R.) or

(ii) not supplying any product for use on the Federal public works project that is produced or manufactured in a foreign country included on the list of foreign countries that discriminate against U.S. firms published by the U.S.T.R.

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER TITLE 18, UNITED STATES CODE, SECTION 1001.

(2) The Offeror shall provide immediate written notice to the Contractor if, at any time, the Offeror learns that its certification was erroneous by reason of changed circumstances.
(3) The Contractor shall not knowingly enter into any subcontract under this contract:

(i) with a subcontractor of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.; or

(ii) for the supply of any product for use on the Federal public works project under this contract that is produced or manufactured in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. The contractor may rely upon the certification in paragraph (g)(1) of this clause unless it has knowledge that the certification is erroneous.
(4) Unless the restrictions of this clause have been waived under the contract for the Federal public works project, if a contractor knowingly enters into a subcontract with a subcontractor that is a subcontractor of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or that supplies any product for use on the Federal public works project under this contract that is produced or manufactured in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R., the Government Contracting Officer may direct, through higher-tier contractors, cancellation of this contract at no cost to the Government.
(5) Definitions. The definitions pertaining to this clause are those that are set forth in 49 CFR 30.7–30.9.
(6) The certification in paragraph (g)(1) of this clause is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the Contractor knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Government Contracting Officer may direct, through higher-tier Contractors, cancellation of this subcontract at no cost to the Government.
(7) The Contractor agrees to insert this clause, without modification, including this paragraph, in all solicitations and subcontracts under this clause.

(End of clause)

SECTION APPENDIX A – FOR CONTRACTS EXCEEDING $2,000 - DAVIS-BACON ACT REQUIREMENTS (29 CFR PART 5)

A copy of the current Davis-Bacon Wage Determination applicable to the Project is included on the following pages.

THIS PAGE RESERVED FOR WAGE RATES

A-1 MINIMUM WAGES

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii) (A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
(2) The classification is utilized in the area by the construction industry; and
(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

A-2 WITHHOLDING

The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration and the Sponsor may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

A-3 PAYROLLS AND BASIC RECORDS

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii) (A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration) if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner,

as the case may be, for transmission to Federal Aviation Administration . The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at ***http://www.dol.gov/esa/whd/forms/wh347instr.htm*** *or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner, as the case may be, for transmission to the Federal Aviation Administration, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).*

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i), and that such information is correct and complete;

(2) That each laborer and mechanic (including each helper, apprentice and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying or transcription by authorized representatives of the Sponsor, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12. (or 2 CFR Part 1200 and/or 2 CFR Part 180).

A-4 APPRENTICES AND TRAINEES

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

A-5 COMPLIANCE WITH COPELAND ACT REQUIREMENTS

The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

A-6 SUBCONTRACTS

The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

A-7 CONTRACT TERMINATION: DEBARMENT

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12 (or 2 CFR Part 1200 and/or 2 CFR Part 180).

A-8 COMPLIANCE WITH DAVIS-BACON AND RELATED ACT REQUIREMENTS

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

A-9 DISPUTES CONCERNING LABOR STANDARDS

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

A-10 CERTIFICATION OF ELIGIBILITY

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

APPENDIX B –FOR CONTRACTS EXCEEDING $100,000 - CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS (29 CFR § 200 Appendix II (E))

B-1 Overtime Requirements.
No Contractor or Subcontractor contracting for any part of the Work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

B-2 Violation; Liability for Unpaid Wages; Liquidated Damages.
In the event of any violation of the clause set forth paragraph 1 of this clause, the Contractor and any Subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and Subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 of this clause, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 of this clause.

B-3 Withholding for Unpaid Wages and Liquidated Damages.
The Federal Aviation Administration or the Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any monies payable on account of work performed by the Contractor or Subcontractor under any such contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or Subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this clause.

B-4 Subcontractors.
The Contractor or Subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 and also a clause requiring the Subcontractor to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any Subcontractor or lower tier Subcontractor with the clauses set forth in paragraphs 1 through 4 of this clause.

B-5 Working Conditions.
No Contractor or Subcontractor may require any laborer or mechanic employed in the performance of any Contract to work in surroundings or under working conditions that are unsanitary, hazardous or dangerous to his health or safety as determined under construction safety and health standards (29 CFR Part 1926) issued by the Department of Labor.

APPENDIX C – FOR CONTRACTS EXCEEDING $150,000 - CLEAN AIR AND WATER POLLUTION CONTROL REQUIREMENTS (2 CFR § 200, Appendix II (G))

C-1

Contractor, in carrying out Work under this Contract, agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. § 740-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration. Contractor also agrees that it shall at all times comply with all applicable state air and water quality standards; with all pollution control laws; and with such rules, regulations, and directives as may be lawfully issued by a local, state, or federal agency having within its jurisdiction the protection of the environment in the area surrounding where work under this Contract will be performed. In addition, the Contractor shall comply with directives given by the Project Engineer in implementation of the letter and intent of FAA Advisory Circular 150/5370-10, Item P-156, Temporary Air and Water Pollution, Soil Erosion and Siltation Control. Contractor must include this requirement in all subcontracts that exceed $150,000.

C-2 Contractors and Subcontractors agree:

a. *That any facility to be used in the performance of the Contract or subcontract or to benefit from the Contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;*
b. *To comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 U.S.C. 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308 of the Acts, respectively, and all other regulations and guidelines issued thereunder;*
c. *That, as a condition for the award of this Contract, the Contractor or Subcontractor will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be used for the performance of or benefit from the Contract is under consideration to be listed on the EPA List of Violating Facilities;*
d. *To include or cause to be included in any construction contract or subcontract which exceeds $150,000 the aforementioned criteria and requirements.*

APPENDIX D - MANDATORY REQUIREMENT FOR ALL AIP FUNDED CONSTRUCTION PROJECTS INVOLVING ELECTRICAL ENERGY OR OTHER HAZARDOUS ENERGY SOURCES

For projects involving electrical energy or other hazardous energy source, the Contractor shall submit a copy of their Lockout/Tagout program which meets the requirements of 29 CFR 1910.331, Safety Related Work Practices (OSHA). During the performance of electrical work, it is recommended than an unannounced inspection be performed by the Owner or his agent to determine if the Lockout/Tagout program is being followed. Immediate action shall be taken to correct noncompliance, including suspension of work when necessary.

END OF SECTION SP-1

SECTION 00 31 11 - PROJECT DIRECTORY

OWNER

Greater Orlando Aviation Authority
Orlando International Airport
Mr. Davin Ruohomaki
Senior Director, Engineering and Construction
One Jeff Fuqua Blvd.
Orlando, FL 32827
Phone: (407) 825-3105

CONSULTANT

HNTB CORPORATION
Senior Project Architect Matthew Granlund, RA
11346 Terminal C Service Road, Orlando, FL 32824
Phone: (407) 825-1594
Email: mgranlund@hntb.com

END OF SECTION 00 31 11

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SECTION 00 41 13 - BID FORM (SINGLE-PRIME CONTRACT)

BID
FOR THE GREATER ORLANDO AVIATION AUTHORITY

Submitted By: Hensel Phelps Construction Co.
(Bidder's Name)

Date: August 2, 2022

The undersigned, as Bidder, hereby declares that the only person or persons interested in this Bid as principal or principals is or are named herein and that no person other than herein mentioned has any interest in this Bid or in the Contract to be entered into; that this Bid is made without connection with any other person, company or parties making a Bid; and that it is in all respects fair and in good faith without collusion or fraud. Bidder represents to the Owner that, except as may be disclosed in an Addendum hereto, no person who is presently (or for Contracts which are being funded in whole or in part by the Florida Department of Transportation, who has within the past year been) an officer, employee or agent of the Owner has any interest, either directly or indirectly, in the business of the Bidder to be conducted under this Contract, and that no such person shall have any such interest at any time during the term of the Contract, should it be awarded the Bidder.

The Bidder further represents that it has examined the site of the Work and informed itself fully in regard to all conditions pertaining to the place where the work is to be done; that it has examined the plans and specifications for the Work and other Contract Documents relative thereto and has read all of the Addenda furnished prior to the opening of the Bids, as acknowledged below; and that it has otherwise fully informed itself regarding the nature, extent, scope and details of the Work to be performed.

If provided with a Notice of Intent to Award the Contract by the Owner, the Bidder shall execute and deliver to the Owner all of the documents required by the Contract Documents, including but not limited to, the Contract Agreement and the Performance and Payment Bonds in the form contained in the Contract Documents, furnish the required evidence of the specified insurance coverages, furnish all necessary permits, licenses, materials, equipment, machinery, maintenance, tools, apparatus, means of transportation and labor necessary to complete the Work provided for in the Contract Documents for "Bid Package BP-S00195, , Orlando International Airport," Orlando, Florida.

The Bidder shall commence work specified herein within the time limits set forth in the General Provisions, Section 20, Bid Requirements and Conditions, which time limits the Bidder acknowledges are reasonable.

If the Bidder improperly withdraws its Bid or fails to execute and deliver to the Owner any of the documents required by the Contract Documents, within ten (10) days after the date of the Notice of Intent to Award, the Owner may seek recourse against the Bid Security as provided for in the Contract Documents.

If the Bidder fails to complete the Work within the scheduled time or any authorized extension thereof, Liquidated Damages, in accordance with the Contract Documents, shall be deducted from the Total Contract Price.

Acknowledgment is hereby made of the following Addenda (identified by number) received since issuance of the Plans and Specifications:

ADDENDA	DATE
Addendum 01	6/28/2022
Addendum 02	7/1/2022
Addendum 03	7/8/2022
Addendum 04	7/8/2022
Addendum 05	7/11/2022

ADDENDA	DATE
Addendum 06	7/13/2022
Addendum 07	7/15/2022
Addendum 08	7/22/2022
Addendum 09	7/28/2022

EQUAL OPPORTUNITY REPORT

The Bidder shall complete the following statement by checking the appropriate space.

The Bidder has__X__has not_____participated in a previous contract subject to the equal opportunity clause prescribed by Executive Order 10925, or Executive Order 11114, or Executive Order 11246.

The Bidder has__X__has not_____submitted all compliance reports in connection with any such contract due under the applicable filing requirements; and that representations indicating submission of required compliance reports signed by proposed Subcontractors will be obtained prior to award of subcontracts.

If the Bidder has participated in a previous contract subject to the equal opportunity clause and has not submitted compliance reports due under applicable filing requirements, the Bidder shall submit a compliance report on Standard Form 100, "Employee Information Report EEO-1" prior to the award of contract.

For contracts equal to or exceeding $25,000 - CERTIFICATION OF BIDDER REGARDING DEBARMENT AND SUSPENSION

The Contract that ultimately results from this solicitation is a "covered transaction" as defined by Title 2 CFR Part 180. The Bidder certifies, by submission of this ~~proposal~~ *Bid* or acceptance of this Contract, that neither it nor its Principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntary excluded by any Federal department or agency from participation in this transaction. It further agrees that by submitting this ~~*Bid*~~ that, if it is the successful Bidder, it will comply with Title 2 CFR Part 1200 and Title 2 CFR Part 180, Subpart C by administering each lower tier subcontract that exceeds $25,000 as a "covered transaction."

For contracts equal to or exceeding $25,000 - CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMENT AND SUSPENSION

The successful bidder, by administering each lower tier subcontract that exceeds $25,000 as a "covered transaction," must verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this Federally assisted project. The successful bidder shall accomplish this by: (i) Checking the System for Award Management at website: http://www.sam.gov, (ii) Collecting a certification statement similar to the previous Certificate of Bidder Regarding Debarment and Suspension, above, and (iii) Inserting a clause or condition in the covered transaction with the lower tier contract.

If the FAA later determines that a lower tier participant failed to disclose to a higher tier participant that they were excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedy, including suspension and debarment of the non-compliant participant.

For all contracts – CERTIFICATION OF BIDDER AND ALL LOWER TIER CONTRACTORS REGARDING THE OWNER'S DEBARMENT LIST

Any entity or individual placed on the Owner's Debarment List pursuant to the Owner's Policy, Section 130.04, may not provide any goods or services to the Owner, on behalf of the Owner, or on the Owner's property, regardless of whether there is a contractual relationship with the Owner. You may request a copy of the Owner's Debarment List for your review at the following email:debarmentlist@goaa.org. The successful bidder hereby certifies that neither it nor its subcontractors or subconsultants, of any tier, is on the Owner's Debarment List at any time during performance under this Contract.

Buy American Certification

BIDDER MUST CHECK ONE OF THE FOUR BOXES.

Certificate of Buy American Compliance for Total Facility
(Use only for solicitations construction of buildings such as Terminal, SRE, ARFF, etc.)

As a matter of Bid responsiveness, the Bidder must complete, sign, date, and submit this certification statement with their Bid. The Bidder must indicate how they intend to comply with 49 USC § 50101 by selecting one of the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (i.e. not both) by inserting a checkmark (✓) or the letter "X".

☒ Bidder hereby certifies that it will comply with 49 USC. 50101 by:

1. Only installing steel and manufactured products produced in the United States; or
2. Installing manufactured products for which the FAA has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
3. Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the Bidder agrees:

1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing US domestic products
3. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines are justified.

☐ Bidder hereby certifies it cannot comply with the 100% Buy American Preferences of 49 USC § 50101(a), but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent Bidder agrees:

1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that supports the type of waiver being requested.
2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the Bid, offer, or proposal.

3. To faithfully comply with providing US domestic products at or above the approved US domestic content percentage as approved by the FAA.
4. To furnish US domestic product for any waiver request that the FAA rejects.
5. To refrain from seeking a waiver request after establishment of the Contract, unless extenuating circumstances emerge that the FAA determines are justified.

Required Documentation

Type 3 Waiver - The cost of components and subcomponents produced in the United States is more that 60% of the cost of all components and subcomponents of the "facility." The required documentation for a Type 3 waiver is:

1. Listing of all manufactured products that are not comprised of 100% US domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety),
2. Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly and installation at project location.
3. Percentage of non-domestic component and subcomponent cost as compared to total "facility" component and subcomponent costs, excluding labor costs associated with final assembly and installation at project location.

Type 4 Waiver – Total cost of project using US domestic source product exceeds the total project cost using non-domestic product by 25%. The required documentation for a type 4 of waiver is:

1. Detailed cost information for total project using US domestic product
2. Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

Buy American Certification

Certificate of Buy American Compliance for Manufactured Products
(Use for only for solicitations for non-building construction projects, equipment acquisition projects)

As a matter of Bid responsiveness, the Bidder must complete, sign, date, and submit this certification statement with their Bid. The Bidder must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter "X".

☒ Bidder hereby certifies that it will comply with 49 USC § 50101 by:

1. Only installing steel and manufactured products produced in the United States, or;
2. Installing manufactured products for which the FAA has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing, or;
3. Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder agrees:

1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing US domestic product
3. To furnish US domestic product for any waiver request that the FAA rejects
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines are justified.

☐ The Bidder hereby certifies it cannot comply with the 100% Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent Bidder with the apparent low Bid agrees:

1. To the submit to the Owner within 15 calendar days of the Bid opening, a formal waiver request and required documentation that supports the type of waiver being requested.
2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the Bid, offer, or proposal.
3. To faithfully comply with providing US domestic products at or above the approved US domestic content percentage as approved by the FAA.
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

Required Documentation

Type 3 Waiver - The cost of the item components and subcomponents produced in the United States is more that 60% of the cost of all components and subcomponents of the "item." The required documentation for a Type 3 waiver is:

1. Listing of all product components and subcomponents that are not comprised of 100% US domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
2. Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
3. Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using US domestic source product exceeds the total project cost using non-domestic product by 25%. The required documentation for a Type 4 of waiver is:

1. Detailed cost information for total project using US domestic product
2. Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

August 2, 2022 — Date

Signature

Hensel Phelps Construction Co. — Company Name

Vice President — Title

ADDITIONAL INSURED COST DISCLOSURE

Contractor's commercial liability and automobile insurance must include an endorsement for all additional insureds as provided in GP70-25(A). The cost, if any, of obtaining insurance that covers the Owner is not eligible for reimbursement from Airport Improvement Program grant proceeds. Contractor must disclose this cost by checking (√) and/or completing one of the following statements:

__x__Contractor's insurance company does not charge for this endorsement, or

_____Contractor's insurance company does charge for this endorsement and the cost is $_____.

DBE PROGRAM ACKNOWLEDGEMENT

By submitting a Bid under this solicitation, Bidder represents that it has reviewed and familiarized itself with the Owner's Disadvantaged Business Enterprise Participation Program (DBE). **See the Advertisement for the DBE Participation Goal.**

SCRUTINIZED COMPANY CERTIFICATION

By submitting a Bid:

A. (applicable to all contracts, regardless of value) – Bidder hereby certifies that it is not on the Scrutinized Companies that Boycott Israel List and is not engaged in a boycott of Israel, as defined in Florida Statutes § 287.135, as amended;

AND

B. (applicable to contracts that may be $1,000,000 or more) - Bidder hereby certifies that it is: (1) not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List as defined in Florida Statutes § 287.135; and (2) not engaged in business operations in Cuba or Syria, as defined in Florida Statutes § 287.135, as amended.

CERTIFICATION OF BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The Bidder must complete the following two certification statements. The Bidder must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (.) in the space following the applicable response. The Bidder agrees that, if awarded a Contract resulting from this Solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications:

(1) The Bidder represents that:

☐ it is

☒ it is not

a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

(2) The Bidder represents that:

☐ it is

☒ it is not

a corporation that was convicted of a criminal violation under any Federal law within the preceding twenty-four (24) months.

If a Bidder responds in the affirmative to either of the above representations, the Bidder is ineligible to receive an award unless the sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The Bidder therefore must provide information to the Owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency's SDO to facilitate completion of the required considerations before award decisions are made.

Term Definitions for this Certification:
Felony conviction: Felony conviction means a conviction within the preceding twenty-four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

Tax Delinquency: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

PUBLIC ENTITY CRIMES ACT

The Contractor represents that it is not precluded from submitting a bid or proposal under Section 287.133(2)(a), which provides as follows: A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal or reply on a contract to provide any goods or services to a public entity, may not submit a bid, proposal or reply on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount set forth in Florida Statutes s.287.017, for CATEGORY TWO for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

DISCRIMINATORY VENDOR LIST

The Contractor represents that it is not precluded from submitting a bid or proposal under Section 287.134, which provides as follows: An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity unless that entity or affiliate has been removed from the list pursuant to Florida law.

FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) QUALIFICATION (if applicable)

The Contractor represents that neither it nor its affiliates have had their Certificate of Qualification suspended, revoked or denied by the FDOT, or determined by the FDOT to be a non-responsible contractor.

BID

FOR ALL WORK REQUIRED IN ACCORDANCE WITH THE APPLICABLE DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS, INCLUDING ALL COSTS RELATED TO THE WORK, AND ANY REQUIRED PERMITS, TAXES, BONDS AND INSURANCE, THE UNDERSIGNED SUBMITS A **TOTAL BID PRICE OF:**

BID SCHEDULE

(insert applicable bid schedule here,
i.e.: Schedule 1 plus Schedule 2 or unit price schedule)

Contractor's Bid: $ 277,006,000

~~Owner's DRB Allowance: $~~

Base Bid: $ 277,006,000
(Base Bid is the Contractor's Bid plus Owner's DRB Allowance plus Allowances, if any)

(insert applicable Alternates here)

TOTAL BID PRICE: $ 277,006,000

Two Hundred Seventy Seven Million Six Thousand **Dollars**

(Total Bid Price is the Base Bid plus Alternates, if any.)

(Bidder's Signature)

Vice President
(Bidder's Title)

August 2, 2022
(Date)

KHazen@henselphelps.com
(Email)

(If Bidder is a corporation or LLC, complete this signature block)

Fill in the name of the corporation or LLC, followed by the signature of the officer signing on behalf of the corporation or LLC, name and officer's title and Secretary attestation.)

The below Corporation is organized and existing under the laws of the State of_____ authorized by law to make this bid and perform all work and furnish materials and equipment required under the Contract Documents, and is authorized to do business in the State of Florida.

Federal ID #_____ _____
(Name of Corporation or LLC)

Phone:_____ By:_____
(signature of authorized officer)

Fax:_____ Name:_____

Date:_____ Title:_____

Address:_____

Attest:_____
(Affix Corporate Seal) (Secretary)

The full name, address and title of every Officer of the Corporation (including the President, Vice President, Secretary, and Treasurer) and every member of the LLC is as follows (attach additional pages if necessary):

Name	Address	Title
Name	Address	Title
Name	Address	Title
Name	Address	Title

SECTION 00 43 13 - BID SECURITY FORM

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned Hensel Phelps Construction Co., as Principal, and Travelers Casualty and Surety Company, as Surety, are held and firmly bound unto the Greater Orlando Aviation Authority (herein "Owner"), in the penal sum of Ten Percent (10%) of the Sum of the Total Bid Price DOLLARS ($----------) for the payment of which, well and truly to be made we hereby jointly and severally bind ourselves, our successors and assigns.

SIGNED THIS 2nd DAY OF August, 2022.

The condition of the above obligation is such that whereas the Principal has submitted to the Owner a certain Bid, attached hereto and made a part hereof, to enter into a contract in the form contained in the Bid Documents. for BP-S00195, , Orlando International Airport.

NOW, THEREFORE, if

said Bid shall be rejected; or

if the Guarantee Period, as defined in the Instructions to Bidders, expires from the time and date fixed for opening of Bids before Notice of Intent to Award the Contract is given to Principal; or

if Notice of Intent to Award the Contract is given to the Principal and the Principal shall, within ten (10) business days of the date of the Notice of Intent to Award the Contract; execute and deliver a contract in the form of Contract Agreement contained in the Bid Documents, properly completed in accordance with the Instructions to Bidders; and shall furnish a Performance Bond for its faithful performance of the Contract, and a Payment Bond for the payment of all persons performing labor or furnishing materials or supplies in connection therewith, in the forms contained in the Bid Documents; and shall provide satisfactory evidence of all required insurance coverage; and shall provide evidence satisfactory to the Owner of the authority of the person or persons executing the Contract and all other documents on its behalf; and shall provide the statements, certifications and data relating to participation identified in the Instructions to Bidders; and shall in all other respects perform its obligations pursuant to the terms of the Bid;

then this obligation shall be void, otherwise the same shall be forfeited to the Owner, not as a penalty, but in liquidation of and compensation for damages; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the Penal Sum of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by any extension of the time within which the Owner may provide Notice of Intent to Award the Contract or within which the Principal or the Owner may execute, deliver, furnish, provide or perform its obligations and the Surety does hereby waive notice of any such extensions, provided, however, the Guarantee Period may be extended when the written consent of the Surety is obtained.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year first set forth above.

Signed, sealed and delivered
in the presence of:

HENSEL PHELPS CONSTRUCTION CO. COMPANY (SEAL) SEAL DELAWARE

(SEAL)

(Countersignature by a Florida Licensed Agent)

Kelly T. Urwiller, Florida Non-Resident Agent
Name and Title
Flood & Peterson Insurance Inc.
Agency
4687 West 18th Street, Greeley, CO 80634
Address

Hensel Phelps Construction Co.
Principal

By: Kirk J. Hazen

Kirk J. Hazen, Vice President
Name and Title

Travelers Casualty and Surety Company
Surety

By: Kelly T. Urwiller

Kelly T. Urwiller, Attorney-in-Fact
Name and Title
Flood & Peterson Insurance Inc.
Agency
4687 West 18th Street, Greeley, CO 80634
Address

NOTE: If Principal or Surety are corporations, the respective corporate seals should be affixed. Additionally, a certified copy of a Power-of-Attorney appointing the individual Attorney-in-Fact for the Surety, as well as the Power-of-Attorney appointing the Florida licensed agent, should be attached.

END OF SECTION 00 43 13

TRAVELERS

Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Kelly T Urwiller** of **GREELEY**, **Colorado**, their true and lawful Attorney(s)-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **21st** day of **April**, **2021**.

State of Connecticut

City of Hartford ss.

By: _____
Robert L. Raney, Senior Vice President

On this the **21st** day of **April**, **2021**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, **2026**

_____
Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this 2nd day of August, 2022

_____
Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney(s)-in-Fact and the details of the bond to which this Power of Attorney is attached.

SECTION 00 41 13.15 - EXHIBIT D

Bidder: HENSEL PHELPS

SCHEDULE OF DBE SUBCONTRACTOR PARTICIPATION OF TOTAL BID PRICE

	"A" Name of Certified DBE Firm, Manufacturer, Vendor/Supplier	"B" Address and phone number	"C" Scope of Work	"D" Estimated Subcontract Amount ($)*	"E" Vendor/supplier Subcontract Amount ($)**
1	JCB Construction Inc	800 W Gore St. Orlando, FL 32805 (407) 425-9880	Staffing	$ 1,102,680	
2	RL Burns Inc	1203 W Gore St Orlando, FL 32805 (407) 839-1131	Staffing	$ 729,018	
3	VOTUM Construction, LLC	1405 West Colonial Drive, Suite A, Orlando, FL 32804 (407) 704-1743	Staffing	$ 1,293,675	
4	Praise Contracting llc	10863 Arbor View Blvd. Orlando FL 32825 (407) 864-5481	Staffing	$ 594,000	
5	PA Wallace and Associates, Inc	807 Orlando Ave # S Winter Park, FL 32789 (407)643-8989	Staffing	$ 1,300,000	
6	EcoPreserve	530 East Central Blvd.Suite 1004 Orlando, Florida 32801 (321) 351-8611	LEED	$ 690,000	
7	On Point Surveying Inc	PO Box 770931 Winter Garden FL 34761 (407) 989-8128	Surveying	$ 20,500	
8	Competitive Edge Partners & Consulting, LLC	618 Wymore Rd Winter Park, FL 32789 (407)203-7064	Site Logistics	$ 1,739,108	
9	Reyco Contracting Solutions	196 East 9 Mile Road, Suite # F, Pensacola, FL 32534 (919) 673-0171	Masonry	$ 2,271,000	
10	Commercial Fabricators, Inc.	2045 Industrial Drive Newton, NC 28658 (828) 465-6792	Miscellaneous Steel	$ 3,577,045	
11	Work Horse Temps, LLC	5401 S Kirkman Rd #310 Orlando, FL 32819 (407)926-0340	Ornamental Metals Labor	$ 53,106	

	"A"	"B"	"C"	"D"	"E"
	Name of Certified DBE Firm, Manufacturer, Vendor/Supplier	Address and phone number	Scope of Work	Estimated Subcontract Amount ($)*	Vendor/supplier Subcontract Amount ($)**
12	MelDon Commercial Products, Inc.	1019 N Vine Street Berwick, PA 18603 (570) 520-4042	Ornamental Rails Install	$ 523,633	
13	MelDon Commercial Products, Inc.	1019 N Vine Street Berwick, PA 18603 (570) 520-4042	Column Covers Supply	$ 251,150	$ 418,583
14	MelDon Commercial Products, Inc.	1019 N Vine Street Berwick, PA 18603 (570) 520-4042	Millwork Supply	$ 160,763	$ 267,938
15	Work Horse Temps, LLC	5401 S Kirkman Rd #310 Orlando, FL 32819 (407)926-0340	Millwork Install	$ 60,091	
16	C&K United Sheet Metal & Mechanical	2805 Lincoln Ave Evansville, IN 47714 (812) 423-5090	Metal Panels Install	$ 1,050,000	
17	MULE Engineering & Construction	13019 Shadow Bend Ct Winter Garden, FL 34787 (407) 543-6414	Doors, Frames & Hardware	$ 2,051,000	
18	Designers West, Inc	5609 S Orange Ave Edgewood, FL 32809 (407)601-3433	Flooring	$ 1,428,000	
19	Exterior Walls	4031 Clarcona Ocoee Rd Orlando, Florida 32810 (407)854-7076	Stucco	$ 1,073,000	
20	Reyco Contracting Solutions	196 East 9 Mile Road, Suite # F, Pensacola, FL 32534 (919) 673-0171	Painting	$ 793,000	
21	Sky Builders USA	40 W Crystal Lake St, 200 Orlando, FL 32806 (407) 362-1870	Specialties	$ 1,898,000	
22	AC Signs, LLC	11100 Astronaut Blvd Orlando, FL 32837 (407) 456-4877	Signage	$ 794,000	
23	VOTUM Construction, LLC	1405 West Colonial Drive, Suite A, Orlando, FL 32804 (407) 704-1743	BHS Canopies	$ 1,433,000	
24	SIM Robotics	37 N. Orange Avenue, Suite 500 Orlando, FL 32801 (407) 777-4220	Elevator & Escalator (BIM)	$ 37,400	
25	Osorno Group Corp	8107 NW 33rd Street Doral, FL 33122 (786) 842-3027	Mechanical Insulation	$ 3,864,000	

	"A" Name of Certified DBE Firm, Manufacturer, Vendor/Supplier	"B" Address and phone number	"C" Scope of Work	"D" Estimated Subcontract Amount ($)*	"E" Vendor/supplier Subcontract Amount ($)**
26	Diversified Supply, Inc.	4749 Patch Road, Suite 200 Orlando, FL 32822 (407) 247-4744	Electrical Equipment Supply	$ 5,113,800	$ 8,523,000
27	Quality Cable Contractors, Inc	1936 Premier Row, Suite 600 Orlando, FL 32809 (407)246-0606	Low Voltage	$ 7,111,000	
28	Power Engineering Group, Inc	6635 Narcoossee Road, Orlando, FL 32822 (407) 277-3150	Low Voltage	$ 13,800,000	
29	Certified Network Professionals, Inc.	5727 NW 7th Street, Suite 293 Miami, FL 33126 (954) 610-0443	Low Voltage	$ 641,000	
30	Gosalia Concrete Constructors	4607 N 56th Street Tampa, FL 33610 (813) 443-0984	Paving Joint Sealants	$ 168,000	
31	Sunrise Hauling & Excavation, Inc.	345 Enterprise Street Ocoee, FL 34761 (407) 383-3742	Aggregate & Aggregate Hauling	$ 323,000	
			TOTALS	**$ 55,943,969.00**	[redacted]00
	Example Firm, Manufacturer,			$100	
	Example Vendor/Supplier			$60	$100

"D" Show DBE Bid Values: The Bid value in this column for Vendor/Supplier Subcontracts is shown as 60% of column "E" 100% value.

** "E" Show DBE Vendor/Supplier Values: Full Subcontractor Bid Amount**

The undersigned will enter into a formal agreement with the above DBE subcontractors for work listed in the schedule conditioned upon execution of a contract with the Owner.

By: _____

1.0 BIDDER'S QUALIFICATIONS

I (NAME) Kirk Hazen (TITLE) Vice President / District Manager AN AUTHORIZED OFFICER OF (FIRM) HENSEL PHELPS CERTIFY THAT THE BIDDER HAS, WITHIN THE LAST FIVE YEARS, SUCCESSFULLY PERFORMED THE FOLLOWING PROJECTS WHICH INCLUDED CONSTRUCTION ACTIVITIES THAT ARE SIMILAR TO THIS PROJECT. THE FOLLOWING PROJECTS DEMONSTRATE MY FIRM'S EXPERIENCE IN THE INSTALLATION OF (DESIGNER TO LIST SIGNIFICANT PROJECT COMPONENTS)

(LIST AS MANY PROJECTS AS REQUIRED TO INCLUDE ALL TYPES OF WORK SPECIFIED. ADDITIONAL PAGES MAY BE SUBMITTED AS NECESSARY)

PROJECT NAME	OWNER	OWNER'S CONTACT PERSON, ADDRESS, PHONE, FAX	DESIGN PROFESSIONAL	PRIME OR SUB*	CONSTRUCTION VALUE **	COMPLETION DATE
MCO South Terminal C Airside Concourse	Greater Orlando Aviation Authority	Davin Ruohomaki // GOAA 5855 Cargo Road, Orlando, FL 407 825 3105	HNTB	Prime	$679 Million	September 2022
BNA Concourse D & Terminal Wings	Metropolitan Nashville Airport Authority	Traci Holton // MNAA 1 Terminal Drive, Nashville, TN 615 504 2024	Fentress Architects	Prime	$269 Million	July 2020
HNL Makua Concourse Extension	Hawaii Department of Transportation	Valerie Sasuga // Hawaii DOT 300 Rodgers Blvd #6, Honolulu, HI 96819 808 838 8824	KYA Design Group	Prime	$341 Million	August 2021
BWI Concourse A Gate Extension	Maryland Aviation Administration	Randall Paton // Parsons Transportation Group (Owner's Re) 10 East Baltimore St. #801, Baltimore, MD 410 694 0694	WSP	Prime	$47 Million	July 2020

* STATE WHETHER THE WORK WAS PERFORMED BY THE BIDDER AS A PRIME OR SUBCONTRACTOR.

** If Work was performed as a subcontractor, list the construction value of the Work performed (not the Construction value of the entire project)

Signature: 07/19/22
Date:

MCO SOUTH TERMINAL C AIRSIDE

Orlando, FL

OWNER:	VALUE // SIZE:	DELIVERY METHOD:	COMPLETION:
Greater Orlando Aviation Authority	$679 M // 732,895 SF	CM at Risk	September 2022

The Orlando International Airport (MCO) South Terminal Complex and associated apron/taxiway encompasses approximately 300 acres. Hensel Phelps was selected as the Construction Manager at Risk to construct the 732,895 SF Airside Terminal and provided preconstruction, construction, commissioning, and close-out phase services for the Greater Orlando Aviation Authority (GOAA).

The airside terminal has the ability to serve both international and domestic flights and accommodates 20 aircraft. The new world-class domestic and international airport terminal boasts 19 airline gates with flexible configurations to accommodate narrow-body, jumbo and super-jumbo aircraft. Additional work for the project includes the construction of walkways, aircraft loading bridges, and security improvements.

This project follows the Sustainable Management Plan (SMP) for a planned LEED v4 BD +C New Construction project.

From the South Terminal C Airside project's inception, Hensel Phelps set out to exceed the Aviation Authority's statutory goals of 20% MWBE and 4% LDB participation. Hensel Phelps successfully set the South Terminal C Airside Project goals higher and worked to unbundle large portions of the work so that the project could be more inclusive and produce more opportunities for small businesses. The higher goals, outreach, and unbundling paid off. Hensel Phelps has achieved project-wide participation of over 33%, equating to over $222M, through management and construction efforts with many of the project scopes being completed with MWBE/LDB prime contracts.

BNA CONCOURSE D & TERMINAL WINGS

Nashville, TN

OWNER:	VALUE // SIZE:	DELIVERY METHOD:	COMPLETION:
Metropolitan Nashville Airport Authority	$269 M // 302,400 SF	Progressive Design-Build	July 2020

The mission of the project was to increase capacity, expand the terminal, create greater system reliability and redundancy, and shift ticketing and TSA security screening out of the center of the terminal to allow the third project of the BNA Vision to renovate and extend the terminal.

Increased capacity was achieved through construction of the new Concourse D which added six new gates, associate ramp amenities, and function space to support the gates. Concourse C also required significant renovation to allow relocation of airport operations during the construction of Concourse D.

Both the North and South Terminal were expanded for interim TSA checkpoints and future permanent ticketing check-in counters. The South Terminal expansion included concessions, airline ticketing offices, baggage service offices, and bag claim devices while the expanded North wing included airline ticketing offices and baggage service offices.

An entirely new Central Utility Plant was completed and transitioned out of the operating terminal. As the new structure came online, and through complex phasing of construction required at the active high-volume airport, the team was successfully able to relocate every airline's ticketing operation and TSA security screening without interrupting a single flight.

During the project, the team incorporated over $70 million of additional scope as the airport passengers rate was growing 15% annually. Over $146 million was contracted to local trade partners and $78 million to small businesses. Following construction, Concourse D created approximately 2,100 jobs and contributed nearly $92 million back to the local economy.

HNL MAUKA CONCOURSE EXTENSION

Honolulu, HI

OWNER:	VALUE // SIZE:	DELIVERY METHOD:	COMPLETION:
Hawaii Department of Transportation	$341M // 270,242 SF	Design-Bid-Build	August 2021

The $340 million Mauka Concourse Extension project is a modernized terminal facility at the Daniel K. Inouye International Airport (HNL) in Honolulu, Hawaii. The 270,000 SF terminal extension provides additional TSA checkpoints, gates and flights for passengers.

The concourse accommodates six new gates, each with two passenger loading bridges, allowing for a flexible capacity of six widebody or 12-narrow body aircraft. Additionally, the project consists of passenger hold rooms, TSA security screening lanes, USDA inspection stations, jet bridges, and public amenities such as concessions, retail space, restrooms, and information kiosks. The project also includes 23 acres of taxiway asphalt paving and 9.5 acres of concrete paving.

Hensel Phelps self-performed over 300,000 craftwork hours on all site and structural concrete, precast double tee and architectural concrete erection, jet blast barrier and security fencing. Self-work building finishes included solid surface wall panels, millwork installation, column covers, 3-form trellises, toilet partitions and accessories, signage, and FF&E installation. Self-work demolition work included underground utility demolition, excavation, backfill and select building demolition.

The project will obtain LEED Gold certification. This project is the first major terminal expansion at the Honolulu Airport in over 28 years.

BWI CONCOURSE A GATE EXTENSION

Baltimore, MD

OWNER:	VALUE // SIZE:	DELIVERY METHOD:	COMPLETION:
Maryland Aviation Administration	$341M // 55,000 SF	Design-Bid-Build	July 2020

The Baltimore/Washington International Airport (BWI) Concourse A Gate Extension project involves the expansion of five gates in the Terminal A/B complex in order to maintain capacity for Southwest Airlines. The project includes the construction of a 55,000 SF addition to five gates in Concourse A.

Similar to the existing building, the addition consists of two primary levels, an Apron Level and a Departures Level. The Apron Level consists of approximately 24,000 SF of new facility. It includes support spaces such as a mechanical room, electrical and communication rooms and custodial storage rooms. In addition, there is space for concession storage to support the concessions on the Departures Level and unassigned space that is anticipated to be occupied by Southwest Airlines. A small portion of the existing Apron Level is reconfigured for more efficient circulation. The Departures Level includes approximately 31,000 SF of new facility. The addition features five new hold-rooms sized to accommodate B737 MAX8 aircrafts. Approximately 5,000 SF of new food and beverage and retail concession shell space; one new elevator; and new men's and women's restrooms are also included in the addition.

The scope of work for this project includes all labor, material, equipment, coordination and supervision of the above-referenced work. It involves all building trades and specialty work associated with airport terminal facilities. Specific elements of the project include underground utilities, concrete pavement, reinforced concrete and structural steel framing, building envelope systems including architectural curtain wall, metal wall panels, roofing systems and skylights, interior architectural finishes, vertical transportation, hydronic air handling units with associated piping, ducts, and building automation systems, fire protection and fire alarm systems, plumbing systems, electrical distribution, telecommunications, data, and security systems and passenger boarding bridges.

2.0 QUALIFICATIONS SUPPLEMENT

BIDDER SHALL IDENTIFY ALL CONTRACTS WITHIN THE PAST FIVE YEARS WHICH RESULTED IN LITIGATION OR ARBITRATION DESCRIBE THE PROJECT, THE PARTIES TO THE ACTION, THE INITIATOR OF THE ACTION AND THE RESOLUTION OR, IF NOT RESOLVED THE CURRENT STATUS. IF ADDITIONAL SPACE IS NEEDED, THE BIDDER SHALL ATTACH ADDITIONAL PAGES

1. NAME & LOCATION OF PROJECT:
California Air Resource Board, Riverside, CA

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT:
California Department of General Services

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: AVL alleges that it is entitled to recover for additional work performed and for delay impacts. Hensel Phelps strongly disputes the Subcontractor's entitlement to any recovery.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Arbitration

D. WHO INITIATED THE ACTION? AVL Test Systems, Inc.

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? Early stages of arbitration.

2. NAME & LOCATION OF PROJECT:
Intel OCOC - Chandler, AZ

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT: Intel Corporation

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES:
This matter involves claims for additional work and impacts resulting from Owner Owner directed changes and was initially filed as an arbitration before the American Arbitration Assoc

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Arbitration

D. WHO INITIATED THE ACTION? Sturgeon Electric Company, Inc.

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? The parties settled all matters under confidential settlement terms.

END OF SECTION 00 45 13

3. NAME & LOCATION OF PROJECT: Caltech Bungalows Relocation, Pasadena, CA

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT: California Institute of Technology

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: Kelly Sutherlin McLeod Architecture (KMSA) alleges that KSMA and Hensel Phelps entered into fourteen different lump sum agreements between January 12, 2018 and September 28, 2019 for design services and that they are owed $208,936.50 under the agreements, which Hensel Phelps strongly disputed.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Mediation

D. WHO INITIATED THE ACTION? Kelly Sutherlin McLeod Architecture

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? This matter was settled at a mediation that took place in December of 2021 under confidential settlement term and the lawsuit dismissed on 12/31/2021.

4. NAME & LOCATION OF PROJECT: Caltech Bungalows Relocation, Pasadena, CA

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT: California Institute of Technology

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: Eagle alleged that Eagle and Hensel Phelps entered into an oral contract for Eagle to provide labor, equipment and materials for restoration services. Eagle claimed that it was owed $313,449.23 under the oral contract, which Hensel Phelps strongly disputed.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Mediation

D. WHO INITIATED THE ACTION? Eagle Restorations Group Inc.

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? This matter settled under confidential settlement terms and the lawsuit was ultimately dismissed in July of 2021.

5. NAME & LOCATION OF PROJECT: Navy Federal Credit Union, Pensacola, FL

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT: Navy Federal Credit Union

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: After several separate investigations, it was determined that Green Energy's workmanship led to deficiencies in the sanitary sewer line causing blockage and wastewater overflow in the facility. Both Green Energy and its surety refused to perform the repairs, which necessitated Hensel Phelps to perform the repairs, which were completed.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Arbitration

D. WHO INITIATED THE ACTION? Hensel Phelps

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? After arbitration in October 2021, Hensel Phelps settled with Green Energy Contracting.

6. NAME & LOCATION OF PROJECT: Army Reserve Center/Aviation Support Facility, MacDill Air Force Base in Tampa, FL

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT: U.S. Army Corps of Engineers

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: Hensel Phelps and its wick drain subcontractor are seeking compensation for additional work caused by unanticipated soil conditions.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION?

D. WHO INITIATED THE ACTION? Hensel Phelps

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? The matter was heard by the Board in January 2022. The parties are awaiting a decision by the Board.

7. NAME & LOCATION OF PROJECT: NASA Headquarters, Kennedy Space Center, FL

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT: NASA

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: This dispute involved claims brought by Hensel Phelps and its trade partners for extensive schedule delays and impacts experienced while constructing a new office tower for NASA at the Kennedy Space Center. It was Hensel Phelps' position that Hensel Phelps and its trade partners incurred significant additional costs to complete the project because of extra-contractual requirements imposed by NASA.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Mediation

D. WHO INITIATED THE ACTION? Hensel Phelps

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? This matter was settled in September 2021.

8. NAME & LOCATION OF PROJECT:
Allure Apollo - Camp Springs, MD 20746

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT:
Aspire Apollo II, LLC c/o Schwartz Management Company

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: Hensel Phelps' foundation subcontractor, Accu-Crete, initiated arbitration proceedings against Hensel Phelps seeking additional compensation for alleged impacts and changes to Accu-Crete's base scope of work.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Arbritration

D. WHO INITIATED THE ACTION? Accu-Crete

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? The parties reached an amicable resolution in January 2020. The matter has been dismissed.

9. NAME & LOCATION OF PROJECT:
Baltimore Hotel Corporation – Baltimore, MD

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT: Baltimore Hotel Corporation

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: The dispute involves the Baltimore Hotel Corporation's claim that a Hensel Phelps' subcontractor, Southland Industries, installed galvanized rather than copper piping for large diameter domestic water system applications in the facility. Southland strenuously denies the allegations and is defending Hensel Phelps in the matter.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Litigation

D. WHO INITIATED THE ACTION? Baltimore Hotel Corporation

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? Trial is set for September 2022.

10. NAME & LOCATION OF PROJECT: Spacecraft Integration Facility, Merritt Island, FL

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT: Space Florida

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: The dispute stems from Ramage's refusal to correct its defective work on the project pursuant to the owner's explicit instructions as well as follow the clear terms of the subcontract. Because of Ramage's refusal to proceed as directed, Hensel Phelps terminated Ramage in an effort to comply with the terms of the prime contract. Ramage demanded arbitration, citing wrongful termination.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Arbitration

D. WHO INITIATED THE ACTION? Ramage Contracting, Inc.

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? Ramage received a final award of $10,141.00 in addition to some costs and fees.

11. NAME & LOCATION OF PROJECT: Tinker Air Force Base Dental Clinic, Oklahoma County, OK

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT:
US Army Corps of Engineers

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: Hensel Phelps completed the project in 2012. Ever since, the clinic has experienced periodic water leaks after severe weather events. It is Hensel Phelps's position that the water intrusion is partially caused by a defect in the design of the building. Hensel Phelps filed this action to recoup costs of remediation of the leaks.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Mediation

D. WHO INITIATED THE ACTION? Hensel Phelps

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? This matter was settled in July 2020 under confidential settlement terms.

12. NAME & LOCATION OF PROJECT: Spacecraft Integration Facility, Merritt Island, FL

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT: Space Florida

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: Building Management Systems ("BMS") was a subcontractor to Hensel Phelps responsible for the design and construction of the pre-engineered metal building. BMS caused repeated delays to the project and provided poor workmanship to the roof and façade to the point that the owner, Space Florida, and its tenant, Airbus Oneweb Satellites Florida, LLC, forced Hensel Phelps to remove BMS from the project. In response, BMS filed an action against Hensel Phelps and Airbus Oneweb alleging that Hensel Phelps breached the subcontract by not paying BMS and Airbus Oneweb received the benefit of BMS's work. Hensel Phelps sued Space Florida, the true owner of the project, via third-party complaint alleging that Space Florida breached the prime contract by failing to pay Hensel Phelps and is responsible for any damages awarded to BMS in the event BMS prevails.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Mediation

D. WHO INITIATED THE ACTION? Building Management Systems

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? This matter was settled as to all parties at mediation in February 2019

13. NAME & LOCATION OF PROJECT:
LAX Southwest Airlines Terminal 1.5 – Los Angeles, CA

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT:
Southwest Airlines Corporate

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: Plaintiffs alleged that products and methods used by Hensel Phelps' trade partner, Aldridge, infringed their intellectual property and sought damages from Aldridge and its clients.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Litigation

D. WHO INITIATED THE ACTION? Steve Neville, Substructure Support, Inc., and TDP Support, Inc.

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? The court granted summary judgment of non-infringement in favor of the defendants.

14 NAME & LOCATION OF PROJECT: Automated Train Fixed Facilities, Sky Harbor Airport, Phoenix, AZ

A. NAME OF OWNER OR OTHER PARTY TO CONTRACT: City of Phoenix

B. AMOUNT OF DAMAGES ASSESSED AND CIRCUMSTANCES: This subrogation action was filed to recover payments made by Westchester Surplus Lines Insurance Co. Westchester incurred these costs as a result of defective materials supplied by Forms and Surfaces. Westchester assigned their subrogation rights to Hensel Phelps, who prosecuted this matter on Westchester's behalf.

C. DID THIS CONTRACT RESULT IN LITIGATION OR ARBITRATION? Arbitration

D. WHO INITIATED THE ACTION? Westchester Surplus Lines Insurance Co.

E. WHAT WAS THE OUTCOME OR WHAT IS THE STATUS? This matter was settled in January of 2022, with no contribution of funds from Hensel Phelps.

Ron DeSantis, Governor

Halsey Beshears, Secretary

Florida dbpr

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE GENERAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

CHOUTKA, MICHAEL JOSEPH

HENSEL PHELPS CONTRUCTION
6557 HAZELTINE NATIONAL DRIVE
SUITE ONE
ORLANDO FL 32822

LICENSE NUMBER: CGC1509056

EXPIRATION DATE: AUGUST 31, 2022

Always verify licenses online at MyFloridaLicense.com

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.

SECTION 00 45 49 - CERTIFICATE AS TO CORPORATE PRINCIPAL

I, Dylan H. Evento, certify that I am the Secretary of the corporation named as Principal in the foregoing Bid Bond; that Kirk J. Hazen who signed the said Bond on behalf of the Principal was then Vice President of said corporation; that I know [his, her] signature, and [his, her] signature thereto is genuine, and that said Bond was duly signed, sealed and attested for and in behalf of said corporation by authority of its governing body.

Dylan H. Evento, Chief Estimator
Name and Title

Hensel Phelps Construction Co.
Name of Corporation Submitting Bid

(Corporate Seal)

END OF SECTION 00 45 49

GREATER ORLANDO

HANDOUT
10/4/2022
Item 8
OSBD Memo

Memorandum

To: **Members of the Construction Committee**

From: **George Morning, Director, Small Business Development Department**

Date: **October 04, 2022**

Re: **Request for Recommendation of Award of BP-S00195 Term C, Ph 1X – Airside Concourse to Hensel Phelps Construction Co., dba Hensel Phelps Construction, at the Orlando International Airport**

The Aviation Authority established a 20% Disadvantaged Business Enterprise (DBE) participation goal for this project. The Aviation Authority has reviewed the bid submitted by Hensel Phelps Construction, and determined that Hensel Phelps Construction proposes to achieve 19.3% DBE participation as shown in the table below.

The Small Business Development Department (SBDD) has reviewed proposed participation and determined that Hensel Phelps Construction has made Good Faith Efforts to meet the established goal. The bidder came within one percentage point of the established goal, and as evidenced by the number of firms listed in Exhibit D, has demonstrated sufficient outreach efforts. The proposed participation plan also includes a wide variety of qualified firms.

Subcontractors	Scope of Work	NAICS Codes	Subcontract Amount	%
JCB Construction, Inc.	Staffing	237310 - Highway, Street, and Bridge Construction	1,102,680.00	0.40%
Votum Construction LLC	Staffing	541611 - Administrative Management	1,293,675.00	0.47%
Votum Construction LLC	BUS Canopies	236220 - Commercial and Institutional Building Construction	1,433,000.00	0.52%
Praise Contracting LLC	Staffing	541618 - Other Management Consulting Services	594,000.00	0.21%
PA Wallace & Associates, Inc.	Staffing	541611 - Administrative Management	1,300,000.00	0.47%
EcoPreserve, LLC	LEED	541620 - Environmental Consulting Services	690,000.00	0.25%
On Point Surveying, Inc.	Surveying	541370 - Surveying and Mapping (except Geophysical) Services	20,500.00	0.01%
Competitive Edge Partners & Consulting LLC	Site Logistics	238910 - Site Preparation Contractors	1,739,108.00	0.63%
Reyco Contracting Solutions, LLC	Masonry, Painting	236220 - Commercial and Institutional Building Construction	3,064,000.00	1.11%
Commercial Fabricators, Inc.	Miscellaneous Steel	332322 - Sheet Metal Work Manufacturing	3,577,045.00	1.29%
Work Horse Temps, LLC	Ornamental Metals Labor & Millwork Install	561320 - Temporary staffing services	113,197.00	0.04%
MelDon Commercial Products, Inc.	Ornamental Rails Install	238150 - Glass and Glazing Contractors 423390 - Other Construction Material Merchant Wholesalers 425120 - Wholesale Trade Agents and Brokers	523,633.00	0.19%
MelDon Commercial Products, Inc.	Supplier - Millwork & Column Covers Supply	423390 - Other Construction Material Merchant Wholesalers	411,912.60	0.15%
C&K United Sheet Metal & Mechanical, Inc.	Metal Panels Install	238170 - Metal siding installation	1,050,000.00	0.38%
MULE Engineering & Construction, Inc.	Doors, Frames & Hardware	236220 - Commercial and Institutional Building Construction	2,051,000.00	0.74%
Designers West Interiors, Inc.	Flooring	541410 - Interior design services	1,428,000.00	0.52%
Exterior Walls, Inc.	Stucco	238140 - Stucco contractors	1,073,000.00	0.39%
SkyBuilders USA, LLC	Specialties	236220 - Commercial and Institutional Building Construction	1,898,000.00	0.69%
AC Signs, LLC	Signage	339950 - Sign Manufacturing	794,000.00	0.29%
SimRobotics Corp.	Elevator & Escalator BIM	541512 - Computer Systems Design Services	37,400.00	0.01%
Osorno Group, Corp.	Mechanical Insulation	238220 - Plumbing, Heating, and Air-Conditioning Contractors	3,864,000.00	1.39%

Diversified Supply, Inc.	Supplier - Electrical Equipment Supply	423610 - Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	5,113,800.00	1.85%
Quality Cable Contractors, Inc.	Low Voltage	238210 - Low voltage electrical work	7,111,000.00	2.57%
Power Engineering Group, Inc.	Low Voltage	238210 - Electrical Contractors and Other Wiring Installation Contractors	13,800,000.00	4.98%
Certified Network Professionals, Inc.	Low Voltage	238210 - Electrical Contractors and Other Wiring Installation Contractors	641,000.00	0.23%
Gosalia Concrete Constructors, Inc.	Paving Joint Seals	238120 - Structural Steel and Precast Concrete Contractors	168,000.00	0.06%
Sunrise Hauling & Excavating, Inc.	Aggregate & Aggregate Hauling	484220 - Specialized Freight (except Used Goods) Trucking, Local	323,000.00	0.12%
**R L Burns, Inc.*	*Staffing*		***Not DBE Certified***	
		Total DBE Proposed and DBE Percentage Achieved	**55,214,950.60**	**19.9%**
		Total Bid Price	**277,006,000.00**	

**R L Burns, Inc. is MWBE/VBE certified not DBE certified. DBE certification is in the queue for processing. Amount proposed $729,018.00*

SECTION 00 52 13 - CONTRACT FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

THIS CONTRACT made and entered into this 4 day of November, in the year 20 22, by and between the **GREATER ORLANDO AVIATION AUTHORITY**, hereinafter called the Owner, and **HENSEL PHELPS CONSTRUCTION CO. dba HENSEL PHELPS CONSTRUCTION**, hereinafter called the Contractor.

The Contractor, for and in consideration of the Total Contract Price specified below, hereby agrees to furnish all labor, equipment, materials , supplies and services, to complete the Work in conformity with the Contract Documents for "**Bid Package S0195, Terminal C PH 1X – Airside Concourse, Orlando International Airport**." The Contractor agrees to make payment of all proper charges for labor, equipment, materials, supplies and services, and to defend, indemnify, and hold harmless the Owner in accordance with the Contract Documents. If the Contractor shall fail to comply with any of the terms of the Contract Documents, the Owner may avail itself of any or all remedies provided in the Contract Documents. The acceptance of final payment by the Contractor shall be considered as a release in full of all claims against the Owner or any of their members, officers, agents, employees or servants, directly or indirectly relating to, arising out of, or by reason of, this Contract, except for those Claims that have been properly raised in accordance with the Contract Documents and specifically identified by the Contractor as unsettled in the final Application for Payment.

The Owner will pay the Contractor for the Work, according to the terms set forth in the Contract Documents the Total Contract Price of **TWO HUNDRED SEVENTY-SEVEN MILLION SIX THOUSAND AND NO/100 DOLLARS ($277,006,000.00)** subject to approved Contract Modifications, if any.

The Contractor hereby certifies it will utilize the U.S. Department of Homeland Security's Employment Eligibility Verification System, in accordance with the terms governing the use of the system, to confirm the employment eligibility of persons employed by the Contractor, during the term of the Contract, to perform employment duties within Florida. The Contractor specifically represents that it will not discontinue use of the System until every Contract with the Owner has reached Final Completion and all contractual obligations have been fulfilled. The Contractor further certifies that it will include this provision in each Subcontract that involves work for the Owner.

IN WITNESS WHEREOF, the said GREATER ORLANDO AVIATION AUTHORITY has caused this Contract to be executed in its name by its Chief Executive Officer or an Aviation Authority Officer; and attested by its Secretary or its Assistant Secretary, and has caused its seal to be hereto attached; and the Contractor has caused this Contract to be executed in its name by Kirk Hazen, its President, attested by Dylan Evento, its Secretary, and has caused the seal of said corporation to be hereunto attached, all on the day and year first above written.

Signed, sealed and delivered
in the presence of:

GREATER ORLANDO AVIATION AUTHORITY

Assistant Secretary

By: _____
Kevin J. Thibault, P.E.
Chief Executive Officer

(SEAL)

Approved as to Form and Legality
(for the benefit of GOAA only)

this 2 day of Nov., 2022

By: _____
NELSON MULLINS BROAD AND CASSEL
Legal Counsel
Greater Orlando Aviation Authority

HENSEL PHELPS CONSTRUCTION CO. dba
HENSEL PHELPS CONSTRUCTION

Witness

By: _____
President

Witness

Attest: _____
Secretary

(SEAL)

HENSEL PHELPS CONSTRUCTION CO
COMPANY
SEAL
DELAWARE

GREATER ORLANDO AVIATION AUTHORITY
ORLANDO, FLORIDA

SECTION 00 61 13.13 - PERFORMANCE BOND **BOND NO.:** 107710172

The cover page that lists the contact information for the entities involved in this bond is considered the front page of this bond and is an integral part of this bond and, therefore, must not be separated from this bond.

KNOW ALL MEN BY THESE PRESENTS that **Hensel Phelps Construction Co. dba Hensel Phelps Construction**, hereinafter called Principal, and Travelers Casualty and Surety Company, a corporation organized under the laws of the State of Connecticut and licensed to do business in the State of Florida, hereinafter called Surety, are held and firmly bound unto the Greater Orlando Aviation Authority, hereinafter called Owner, in the Penal Sum of **TWO HUNDRED SEVENTY-SEVEN MILLION SIX THOUSAND AND NO/100 DOLLARS ($277,006,000.00),** for the payment of which sum well and truly made, Principal and Surety bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated 11/4/22, entered into a Contract with Owner for **"Bid Package S0195, Terminal C PH 1X – Airside Concourse, Orlando International Airport,"** in accordance with the Contract Documents which are incorporated herein by reference and made a part hereof, and are herein referred to as the Contract.

WHEREAS, Surety is authorized to do business in the State of Florida.

NOW, THEREFORE, the condition of this obligation is such that if Principal:

1. Promptly and faithfully performs the Contract including, but not limited to, its design (if any), construction and warranty provisions in the time and manner prescribed in the Contract, and correction of defective work, and

2. Pays Owner all losses, damages, expenses, costs, attorneys' fees and other legal costs (including, but not limited to, those for investigative and legal support services and appellate proceedings), that Owner sustains resulting directly or indirectly from the conduct of the Principal including, but not limited to, breach or default under the Contract, want of care or skill, negligence, patent infringement, or intentionally wrongful conduct on the part of the Principal, its officers, agents, employees or any other person or entity for whom the Principal is responsible,

then this bond is void; otherwise it shall remain in full force and effect.

3. In the event that the Principal shall fail to perform any of the terms, covenants and conditions of the Contract during the period in which this Performance Bond is in effect, the Surety shall remain liable to the Owner for all such loss or damage (including reasonable attorneys' fees and other legal costs) resulting from any failure to perform up to the amount of the Penal Sum.

4. In the event that the Surety fails to fulfill its obligations under this Performance Bond, then the Surety shall also indemnify and save the Owner harmless from any and all loss, damage, cost and expense, including reasonable attorneys' fees and other legal costs for all trial and appellate proceedings resulting directly or indirectly from the Surety's failure to fulfill its obligations hereunder. This paragraph shall survive the termination or cancellation of this Performance Bond. The obligations set forth in this paragraph shall not be limited by the Penal Sum of this Bond.

5. The Surety's obligations hereunder shall be direct and immediate and not conditional or contingent upon Owner's pursuit of its remedies against Principal, and shall remain in full force and effect notwithstanding (i) amendments or modifications to the Contract entered into by Owner and Principal without the Surety's knowledge or consent, (ii) waivers of any default under the Agreement or the Contract granted by Owner to Principal without

the Surety's consent, (iii) the discharge of Principal from its obligations under the Contract as a result of any proceeding initiated under The Bankruptcy Code of 1978, as the same may be amended, or any similar state or federal law, or any limitation of the liability of Principal or its estate as a result of any such proceeding, or (iv) any other action taken by Owner or Principal that would, in the absence of this clause, result in the release or discharge by operation of law of the Surety from its obligations hereunder.

6. The institution of suit upon this Bond shall be in accordance with Section 95.11(2)(b), Florida Statutes.

7. Any changes in or under the Contract Documents (which include the Plans, Drawings and Specifications) and compliance or noncompliance with any formalities connected with the Contract or the changes therein shall not affect Surety's obligations under this Bond and Surety hereby waives notice of any such changes. Further, Principal and Surety acknowledge that the Penal Sum of this bond shall increase or decrease in accordance with approved changes or other modifications to the Contract Documents.

IN WITNESS WHEREOF, the Principal and Surety have executed this instrument under their several seals on this 4 day of November, 20 22, to be effective as of the date of the Contract, the name and corporate seal of each corporate party being hereto affixed and these presents fully signed by its undersigned representative, pursuant to authority of its governing body.

Signed, sealed and delivered
in the presence of:

HENSEL PHELPS CONSTRUCTION COMPANY (SEAL) DELAWARE SEAL

TRAVELERS CASUALTY AND SURETY COMPANY HARTFORD, CONN. (SEAL)

(Countersignature by a Florida Licensed Agent)

Royal R. Lovell, Florida Non-Resident Agent # P129745
Name and Title
Flood and Peterson Insurance, Inc.
Agency
4687 W. 18th Street, Greeley, CO 80634
Address

Hensel Phelps Construction Co. dba
Hensel Phelps Construction
Principal

By: _____

Kirk J. Hazen, Vice President
Name and Title

Travelers Casualty and Surety Company
Surety

By: _____
Name and Title Royal R. Lovell, Attorney-in-Fact

Flood and Peterson Insurance, Inc.
Agency
4687 W. 18th Street, Greeley, CO 80634
Address

NOTE: If Principal or Surety are corporations, the respective corporate seals should be affixed. Additionally, a certified copy of a Power-of-Attorney appointing the individual Attorney-in-Fact for the Surety, as well as the Power-of-Attorney appointing the Florida licensed agent, should be attached.

TRAVELERS

Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Royal R Lovell** of **GREELEY**, **Colorado**, their true and lawful Attorney(s)-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **21st** day of **April**, **2021**.

State of Connecticut

City of Hartford ss.

By: _____
Robert L. Raney, Senior Vice President

On this the **21st** day of **April**, **2021**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, **2026**

_____
Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this day of ,

_____
Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney(s)-in-Fact and the details of the bond to which this Power of Attorney is attached.

GREATER ORLANDO AVIATION AUTHORITY
ORLANDO, FLORIDA

SECTION 00 61 13.16- PAYMENT BOND FORM **BOND NO.:** 107710172

The cover page that lists the contact information for the entities involved in this bond is considered the front page of this bond and is an integral part of this bond and, therefore, must not be separated from this bond.

KNOW ALL MEN BY THESE PRESENTS that **Hensel Phelps Construction Co. dba Hensel Phelps Construction**, hereinafter called Principal, and Travelers Casualty and Surety Company, a corporation organized under the laws of the State of Connecticut, having its home office in the City of Hartford and licensed to do business in the State of Florida, hereinafter called Surety, are held and firmly bound unto the Greater Orlando Aviation Authority, hereinafter called Owner, for the use and benefit of claimants as hereinbelow defined, in the Penal Sum of **TWO HUNDRED SEVENTY-SEVEN MILLION SIX THOUSAND AND NO/100 DOLLARS ($277,006,000.00)** for the payment of which sum well and truly to be made, Principal and Surety bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated 11/4/22, entered into a contract with Owner for **"Bid Package S0195, Terminal C PH 1X – Airside Concourse, Orlando International Airport,"** in accordance with the Contract Documents which are incorporated herein by reference and made a part hereof, and are herein referred to as the Contract.

WHEREAS, Surety is authorized to do business in the State of Florida.

NOW, THEREFORE, the condition of this obligation is such that if Principal shall promptly make payments to all claimants as defined in Section 255.05(1), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the Contract, then this obligation shall be void; otherwise, it shall remain in full force and effect subject, however, to the following conditions:

1. **This bond is given to comply with Section 255.05, Florida Statutes, and any action instituted by a claimant under this bond for payment must be in accordance with Sections 255.05(2) and 255.05(10), Florida Statutes, as amended, including, but not limited to, the notice and time limitation provisions therein**.

2. Therefore, a claimant, except a laborer, who is not in privity with the Contractor shall, before commencing or not later than 45 days after commencing to furnish labor, services or materials for the prosecution of the work, serve the Contractor with a written notice that he or she intends to look to the bond for protection. A claimant who is not in privity with the Contractor and who has not received payment for furnishing his or her labor, services, or materials shall, serve a written notice of nonpayment on the Contractor and on the Surety. Notices must be served in accordance with Section 255.05(2), as amended. The notice of non-payment shall be under oath and served during the progress of the work or thereafter, but may not be served earlier than forty-five (45) days after the first furnishing of the labor, services or materials by the claimant or later than ninety (90) days after the final furnishing of the labor, services or materials by the claimant, or, with respect to rental equipment, later than 90 days after the date that the rental equipment was last on the job site available for use. Any notice of nonpayment served by a claimant who is not in privity with the contractor which includes sums for retainage must specify the portion of the amount claimed for retainage. No action for the labor, services, or materials may be instituted against the Contractor or the Surety unless both notices have been served. No action shall be instituted against the Contractor or the Surety on the bond after one (1) year from the performance of the labor or completion of the delivery of the materials or supplies.

3. The Surety's obligations hereunder shall remain in full force and effect notwithstanding (i) amendments or modifications to the Contract entered into by Owner and Principal without the Surety's knowledge or consent,

(ii) waivers of compliance with or any default under the Contract granted by Owner to Principal without the Surety's knowledge or consent, (iii) the discharge of Principal from its obligations under the Contract as a result of any proceeding initiated under The Bankruptcy Code of 1978, as the same may be amended, or any similar state or federal law, or any limitation of the liability of Principal or its estate as a result of any such proceeding, or (iv) any other action taken by Owner or Principal that would, in the absence of this clause, result in the release or discharge by operation of law of the Surety from its obligations hereunder.

4. Any changes in or under the Contract Documents (which include the, Drawings and Specifications) and compliance or noncompliance with any formalities connected with the Contract or the changes therein shall not affect Surety's obligations under this Bond and Surety hereby waives notice of any such changes. Further, Principal and Surety acknowledge that the Penal Sum of this Bond shall increase or decrease in accordance with the approved changes or other modifications to the Contract Documents.

IN WITNESS WHEREOF, the Principal and Surety have executed this instrument under their several seals on this 4 day of November, 20 22, to be effective as of the date of the Contract, the name and corporate seal of each corporate party being hereto affixed and these presents fully signed by its undersigned representative, pursuant to authority of its governing body.

Signed, sealed and delivered

In the presence of:

(SEAL)

(SEAL)

(Countersignature by a Florida Licensed Agent)

Royal R. Lovell, Florida Non-Resident Agent # P129745
Name and Title
Flood and Peterson Insurance, Inc.
Agency
4687 W. 18th Street, Greeley, CO 80634
Address

Hensel Phelps Construction Co. dba
Hensel Phelps Construction
Principal

By: _____
Name and Title Kirk J. Hazen, Vice President

Travelers Casualty and Surety Company
Surety

By: _____

Royal R. Lovell, Attorney-in-Fact
Name and Title
Flood and Peterson Insurance, Inc.
Agency
4687 W. 18th Street, Greeley, CO 80634
Address

NOTE: If Principal or Surety are corporations, the respective corporate seals should be affixed. Additionally, a certified copy of a Power-of-Attorney appointing the individual Attorney-in-Fact for the Surety, as well as the Power-of-Attorney appointing the Florida licensed agent, should be attached.

TRAVELERS

Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Royal R Lovell** of **GREELEY** , **Colorado** , their true and lawful Attorney(s)-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **21st** day of **April**, **2021**.

State of Connecticut

City of Hartford ss.

By: _____
Robert L. Raney, Senior Vice President

On this the **21st** day of **April**, **2021**, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of each of the Companies, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of said Companies by himself as a duly authorized officer.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, **2026**

_____
Anna P. Nowik, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of each of the Companies, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of each of the Companies, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this day of , .

_____
Kevin E. Hughes, Assistant Secretary

To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney(s)-in-Fact and the details of the bond to which this Power of Attorney is attached.

SECTION 00 61 13.19 – PERFORMANCE AND PAYMENT BOND CERTIFICATION FORM

GREATER ORLANDO AVIATION AUTHORITY
ORLANDO, FLORIDA

I, Dylan Evento, certify that I am the Secretary of the corporation, the General Partner of the Partnership or Manager or the Managing Member of the LLC, named as Principal in the foregoing Performance and Payment Bonds; that Kirk Hazen who signed the said Bonds on behalf of the Principal was then President or Vice-President of said corporation, the General Partner of the Partnership or the Manager or Managing Member of the LLC; that I know [his, her] signature, and [his, her] signature thereto is genuine, and that said Bonds were duly signed, sealed and attested for and in behalf of said Principal by authority of its governing body or is otherwise authorized by the Principal to enter into this Contract and the Performance and Payment Bonds.

Secretary Signature

Dylan Evento
Secretary Printed Name

HENSEL PHELPS CONSTRUCTION CO. COMPANY SEAL DELAWARE
(Corporate Seal)

SECTION 00 61 13 - PERFORMANCE/PAYMENT BOND COVER SHEET
This cover sheet is an integral part of the attached bonds and must not be separated from them.

GREATER ORLANDO AVIATION AUTHORITY
AND CITY OF ORLANDO, FLORIDA

(Public Work)
In Compliance with Florida Statute Chapter 255.05(1)(a)

PERFORMANCE BOND NO.		107710172
PAYMENT BOND NO.		107710172
CONTRACTOR INFORMATION:	Name	**Hensel Phelps Construction Co. dba Hensel Phelps Construction**
	Address:	6557 Hazeltine National Drive Suite One
		Orlando FL 32822
	Phone:	(407) 856-2400
SURETY PRINCIPAL: BUSINESS INFORMATION	Name	Travelers Casualty and Surety Company
	Address	One Tower Square
		Hartford, CT 06183
	Phone:	(800) 525-8552
OWNER INFORMATION	Name:	Greater Orlando Aviation Authority
	Address	11312 Terminal C Service Road
		Orlando, FL 32824
	Phone	(407) 825-2001
BOND AMOUNT:		$277,006,000.00
CONTRACT NO (*if applicable*):		BP-S0195
DESCRIPTION OF WORK		Terminal C PH 1X – Airside Concourse
PROJECT LOCATION		Orlando International Airport, Orlando, FL
AGENT INFORMATION	Name:	Flood and Peterson Insurance, Inc.
	Address:	4687 W. 18th Street
		Greeley, CO 80634
	Phone:	(800) 356-2295

SECTION 00 62 16 – CERTIFICATE OF INSURANCE FORM

The Contractor shall provide evidence of insurance reflecting compliance with the insurance requirements as listed in Sections 20 and 70 of the General Provisions. Certificates of Insurance shall be remitted using an ACORD form, or in a form acceptable to the Owner and shall be executed by the Agent/Broker and submitted to the Owner's Contracts and Grants Manager prior to contract execution and each policy renewal for the duration of the contract term and statute of repose. Any deductible or self-insurance retention ($0.00 and higher) for each coverage line must be indicated on the Certificate of Insurance.

The Certificate of Insurance shall state the following as certificate holder:

The Greater Orlando Aviation Authority
Engineering and Construction
One Jeff Fuqua Blvd.
Orlando, FL 32827

The Certificate of Insurance shall reflect the Greater Orlando Aviation Authority and the City of Orlando and their members (including without limitation, members of the Owner's board and the City Council and members of the citizens' advisory committees of each), the OAR, and the Designer as additional insured as outlined in General Provisions 70-25. Owner may elect to utilize a third party for the collection and monitoring of Contractor's insurance. Contractor will promptly respond to all requests for information, including, without limitation, requests for copies of insurance policies and Certificate(s) of Insurance evidencing renewal policy periods.

END OF SECTION 00 62 16

SECTION 00 62 76.19 - PARTIAL RELEASE FOR REDUCTION OF RETAINAGE

GREATER ORLANDO AVIATION AUTHORITY

KNOW ALL PERSONS BY THESE PRESENTS, that the undersigned, conditioned upon payment of the sum of _____ DOLLARS ($_____) (payment amount), paid by the Greater Orlando Aviation Authority (hereinafter referred to as "Owner"), does hereby fully and completely discharge and release the Owner from and waives any and all debts, accounts, promises, damages, liens, encumbrances, causes of action, suits, bonds, judgments, claims and demands whatsoever, in law or in equity, which the undersigned ever had, now has or might hereafter have on account of labor performed, material furnished or services rendered, directly or indirectly, for the Contract between the parties, dated _____, known as "BP-S00195, , Orlando International Airport," except for the following Claims, if any, which have been properly raised in accordance with the Contract Documents:
_____(list brief description of Claim or list None). All Claims not specifically listed are hereby waived.

The undersigned further covenants that it will use this payment to make full and final payments to all subcontractors, suppliers, materialmen and any or all other persons supplying material, supplies, services or labor used directly or indirectly in the prosecution of the Work.

The undersigned shall maintain in full force and effect the provisions of the Contract Documents respecting the guaranty against defective work, and any other special guaranties required by the Contract Documents, for the terms provided in the Contract Documents, which terms shall begin to run from the date specified in the Contract Documents.

The undersigned represents and warrants that the statements contained in the foregoing Release are true and correct and that the person signing this Release has full authority to bind the Contractor.

IN WITNESS WHEREOF, I hereunto set my hand and seal this ____ day of _____, ____

WITNESSES:

_____

_____

_____
CONTRACTOR
By:_____

Title: President

(CORPORATE SEAL)

State of:_____
County of:_____

On this _____ day of _____, _____, before me appeared (name) _____, as (office) _____ of (name of Firm) _____, who, being duly sworn, did execute the foregoing affidavit, and who is personally known by me or who presented (type of identification) _____, and who did take an oath.

Notary Public:_____

(Seal)

Printed Name:_____

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/25/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	**CONTACT NAME:** Denise Hill-Holligan
Flood and Peterson	**PHONE (A/C, No, Ext):** (970) 356-0123 **FAX (A/C, No):** (970) 330-1867
PO Box 578	**E-MAIL ADDRESS:** Dhillholligan@floodpeterson.com
Greeley CO 80632	

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A :	Zurich American Insurance Company	16535
INSURER B :	American Zurich Insurance Company	40142
INSURER C :	American Guarantee and Liability	26247
INSURER D :	AXA XL	24554
INSURER E :	National Fire & Marine Ins. Co.	20079
INSURER F :	Steadfast Insurance Company	26387

INSURED

Hensel Phelps Construction
Southeast District
6557 Hazeltine National Drive, Ste 1
Orlando FL 32822

COVERAGES **CERTIFICATE NUMBER:** CL2112643194 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:			GLO369726417	01/01/2022	01/01/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG [ ]	$ 5,000,000 $ 500,000 $ $ 5,000,000 $ 10,000,000 $ 10,000,000 $
A	AUTOMOBILE LIABILITY [X] ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY			BAP369726117	01/01/2022	01/01/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) [ ]	$ 5,000,000 $ $ $ $
C	[X] UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			AUC928038420	01/01/2022	01/01/2023	EACH OCCURRENCE AGGREGATE (Addt'l Limits Attached)	$ 10,000,000 $ 10,000,000 $
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WC369726518	01/01/2022	01/01/2023	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
F	Professional and Pollution Liability			EOC937461718	01/01/2022	01/01/2023	Each Occurrence Aggregate	$25,000,000 $25,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: BP-S0195 - Terminal C PH 1X -Airside Concourse, Orlando International Airport, Orlando, FL
The Greater Orlando Aviation Authority and the City of Orlando, and their respective members (including, without limitation, members of the Owner's Board and the City of Orlando's Council and members of citizens advisory committees of each), officers, agents and employees are included as Additional Insured as required by written contract per the attached endorsements.

CERTIFICATE HOLDER

Greater Orlando Aviation Authority Engineering and Construction
11312 Terminal C Service Road
Orlando, FL 32824

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Nancy Keiser

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AGENCY CUSTOMER ID: _____

LOC #: _____

ADDITIONAL REMARKS SCHEDULE

Page ____ of ____

AGENCY Flood and Peterson	NAMED INSURED Hensel Phelps Construction
POLICY NUMBER Various	
CARRIER Various / NAIC CODE	EFFECTIVE DATE: 01/01/2022

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 **FORM TITLE:** Certificate of Liability Insurance: Notes

2 - D) AXA XL Umbrella US00095537LI22A $15,000,000 Each Occurrence / Aggregate

3 - C) American Guarantee and Liability AEC422694502 $15,000,000 Each Occurrence / Aggregate

4 - E) National Fire & Marine Ins. Co. 42-XSF-31308602 $20,000,000 Each Occurrence / Aggregate

TOTAL UMBRELLA POLICY LIMITS: $60,000,000 EACH OCCURRENCE / $60,000,000 AGGREGATE

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Additional Insured – Automatic – Owners, Lessees Or Contractors

ZURICH

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
GLO369726417	1/01/2022	1/01/2023	1/01/2022			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

Named Insured: Hensel Phelps Construction Co.

Address (including ZIP Code):

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

A. Section **II – Who Is An Insured** is amended to include as an additional insured any person or organization whom you are required to add as an additional insured on this policy under a written contract or written agreement. Such person or organization is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf,

in the performance of your ongoing operations or "your work" as included in the "products-completed operations hazard", which is the subject of the written contract or written agreement.

However, the insurance afforded to such additional insured:

1. Only applies to the extent permitted by law; and
2. Will not be broader than that which you are required by the written contract or written agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusion applies:

This insurance does not apply to:

"Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or failure to render, any professional architectural, engineering or surveying services including:

a. The preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

b. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional architectural, engineering or surveying services.

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C. The following is added to Paragraph **2.** Duties In The Event Of Occurrence, Offense, Claim Or Suit of Section **IV – Commercial General Liability Conditions**:

The additional insured must see to it that:

1. We are notified as soon as practicable of an "occurrence" or offense that may result in a claim;
2. We receive written notice of a claim or "suit" as soon as practicable; and
3. A request for defense and indemnity of the claim or "suit" will promptly be brought against any policy issued by another insurer under which the additional insured may be an insured in any capacity. This provision does not apply to insurance on which the additional insured is a Named Insured if the written contract or written agreement requires that this coverage be primary and non-contributory.

D. For the purposes of the coverage provided by this endorsement:

1. The following is added to the Other Insurance Condition of Section **IV – Commercial General Liability Conditions**:

Primary and Noncontributory insurance

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured provided that:

a. The additional insured is a Named Insured under such other insurance; and

b. You are required by written contract or written agreement that this insurance be primary and not seek contribution from any other insurance available to the additional insured.

2. The following paragraph is added to Paragraph **4.b.** of the Other Insurance Condition of Section **IV – Commercial General Liability Conditions**:

This insurance is excess over:

Any of the other insurance, whether primary, excess, contingent or on any other basis, available to an additional insured, in which the additional insured on our policy is also covered as an additional insured on another policy providing coverage for the same "occurrence", offense, claim or "suit". This provision does not apply to any policy in which the additional insured is a Named Insured on such other policy and where our policy is required by a written contract or written agreement to provide coverage to the additional insured on a primary and non-contributory basis.

E. This endorsement does not apply to an additional insured which has been added to this policy by an endorsement showing the additional insured in a Schedule of additional insureds, and which endorsement applies specifically to that identified additional insured.

F. With respect to the insurance afforded to the additional insureds under this endorsement, the following is added to Section **III – Limits Of Insurance**:

The most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the written contract or written agreement referenced in Paragraph **A.** of this endorsement; or
2. Available under the applicable Limits of Insurance shown in the Declarations,

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

All other terms and conditions of this policy remain unchanged.

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Waiver Of Subrogation (Blanket) Endorsement

ZURICH

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer	Add'l. Prem	Return Prem.
GLO369726417	1/01/2022	1/01/2023	1/01/2022			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

The following is added to the **Transfer Of Rights Of Recovery Against Others To Us Condition:**

If you are required by a written contract or agreement, which is executed before a loss, to waive your rights of recovery from others, we agree to waive our rights of recovery. This waiver of rights shall not be construed to be a waiver with respect to any other operations in which the insured has no contractual interest.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

DESIGNATED INSURED FOR COVERED AUTOS LIABILITY COVERAGE

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" for Covered Autos Liability Coverage under the Who Is An Insured provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Named Insured: Hensel Phelps Construction Co.

Endorsement Effective Date: 1/01/2022

SCHEDULE

Name Of Person(s) Or Organization(s): ANY PERSON OR ORGANIZATION TO WHOM OR WHICH YOU ARE REQUIRED TO PROVIDE ADDITIONAL INSURED STATUS OR ADDITIONAL INSURED STATUS ON A PRIMARY, NON-CONTRIBUTORY BASIS, IN A WRITTEN CONTRACT OR WRITTEN AGREEMENT EXECUTED PRIOR TO LOSS, EXCEPT WHERE SUCH CONTRACT OR AGREEMENT IS PROHIBITED BY LAW.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

Each person or organization shown in the Schedule is an "insured" for Covered Autos Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured provision contained in Paragraph **A.1.** of Section II – Covered Autos Liability Coverage in the Business Auto and Motor Carrier Coverage Forms and Paragraph **D.2.** of Section I – Covered Autos Coverages of the Auto Dealers Coverage Form.

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US (WAIVER OF SUBROGATION)

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Named Insured: Hensel Phelps Construction Co.

Endorsement Effective Date: 1/01/2022

SCHEDULE

Name(s) Of Person(s) Or Organization(s):
ALL PERSONS AND/OR ORGANIZATIONS THAT ARE REQUIRED BY WRITTEN CONTRACT OR AGREEMENT WITH THE INSURED, EXECUTED PRIOR TO THE ACCIDENT OR LOSS, THAT WAIVER OF SUBROGATION BE PROVIDED UNDER THIS POLICY.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The **Transfer Of Rights Of Recovery Against Others To Us** condition does not apply to the person(s) or organization(s) shown in the Schedule, but only to the extent that subrogation is waived prior to the "accident" or the "loss" under a contract with that person or organization.

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WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

ALL PERSONS AND/OR ORGANIZATIONS THAT ARE REQUIRED BY WRITTEN CONTRACT OR AGREEMENT WITH THE INSURED, EXECUTED PRIOR TO THE ACCIDENT OR LOSS, THAT WAIVER OF SUBROGATION BE PROVIDED UNDER THIS POLICY FOR WORK PERFORMED BY YOU FOR THAT PERSON AND/OR ORGANIZATION.

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective Policy No. WC369726518 Endorsement No.

Insured: Hensel Phelps Construction Co. Premium $ N/A

Insurance Company: American Zurich Insurance Company Countersigned by Nancy Keiser, Account Manager

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SECTION 00 62 93 - CONSTRUCTION ADMINISTRATION FORMS

PART 1 - GENERAL

The following listed forms are hereby made a part of the Construction Documents.

PART 2 - PRODUCTS

Index of Construction Administration Forms for Contractor

Form #	Description
001	Parking Permit Office - Release Form
002	Badge & ID Office (Access Control Office) – Release Form
003	Key Shop - Release Form
006	LDB Designated Mobilization Payment Release Form (Shall not apply if the Project is funded by the State of Florida and requires Disadvantaged Business Enterprise (DBE) participation as defined in the Instructions to Bidders)
007	Certificate of Substantial Completion (CoSC)
008	Substantial Completion Acceptance (SCA)
009	Partial Occupancy/Use Agreement (POUA)
010	Application for Payment Forms
	010-Cover Cover Sheet
	010-Bkdwn Breakdown
	010-SM Stored Materials
	010-DISB Contractor Disbursements to Subcontractors/Suppliers
010A	Remittance Information Request
013A	Owner's Close-Out Documentation Checklist
015	Request for Information
016	Request for Clarification
017	Job Memorandum
018	Electrical System Interruption/Utility Outage Notification
018A	UON Procedures for Contractors and UON Checklist
018B	Roofing Impact Notification (RIN)
018C	Security System Interruption/Utility Outage Notification
018D	Utility Outage Notification
018E	Energized Electrical Work Permit
018F	Maintenance of Traffic (MOT) Notification
018G	Smoke Detector Notification
018H	TBD Blank Notification
019	Designer's Supplemental Instructions
020	Utility Service Request (to OUC by Owner)
021	Request for Use of Lot(s) on Canal Road
023	Subcontractor's Sworn Statement of Account
024	Powder Actuated Tools Permit
025	Receipt for Commissioning Closeout Documents
026	City of Orlando Wastewater Division Construction Closeout Checklist
---	Construction Coordination Phone List
---	Airport Layout Plan (ALP) Change Request
---	Hot Work (Burn) Permit
---	Key Plans and Instructions

PART 3 - EXECUTION

3.1 During the administration of the Contract, the Contractor will be required to complete various construction administration forms as a part of the Greater Orlando Aviation Authority's Management System. These forms are identified in the "Index of Construction Forms" and will be issued at the Pre-Construction Conference. These forms are available upon request prior to that time. The Forms may be revised during the construction period and the Contractor will be required to comply with these revisions.

END OF SECTION 00 62 93

PART 3 - EXECUTION

3.1 During the administration of the Contract, the Contractor will be required to complete various construction administration forms as a part of the Greater Orlando Aviation Authority's Management System. These forms are identified in the "Index of Construction Forms" and will be issued at the Pre-Construction Conference. These forms are available upon request prior to that time. The Forms may be revised during the construction period and the Contractor will be required to comply with these revisions.

END OF SECTION 00 62 93

SECTION 00 65 19.29 - FINAL RELEASE FORM

GREATER ORLANDO AVIATION AUTHORITY

KNOW ALL PERSONS BY THESE PRESENTS, that the undersigned, **conditioned upon payment** of the sum of _____ DOLLARS ($_____) (final total Contract amount), paid by the Greater Orlando Aviation Authority (hereinafter referred to as "Owner"), does hereby fully and completely discharge and release the Owner from and waives any and all debts, accounts, promises, damages, liens, encumbrances, causes of action, suits, bonds, judgments, claims and demands whatsoever, in law or in equity, which the undersigned ever had, now has or might hereafter have on account of labor performed, material furnished or services rendered, directly or indirectly, for the Contract between the parties, dated _____, known as " BP-S00195, , Orlando International Airport," except for those claims, disputes and other matters arising out of or relating to said Contract which have been raised by written demand in accordance with the Contract Documents prior to this date and identified by the Contractor as unsettled in the final Application for Payment.

The undersigned further covenants that all subcontractors, suppliers, materialmen and any or all other persons supplying material, supplies, services or labor used directly or indirectly in or for the Work will be paid in full upon receipt of final payment from Owner.

The undersigned shall maintain in full force and effect the provisions of the Contract Documents respecting the guaranty against defective work, and any other special guaranties required by the Contract Documents, for the terms provided in the Contract Documents, which terms shall begin to run from the date specified in the Contract Documents.

The undersigned represents and warrants that the statements contained in the foregoing Release are correct.

IN WITNESS WHEREOF, I hereunto set my hand and seal this ____ day of _____, ___

WITNESSES:

_____

_____

_____
CONTRACTOR

By:_____

Title:_____

(CORPORATE SEAL)
(If Applicable)

Final Release Form must be signed by a corporate officer or such other representative of the Contractor with authority to bind the Contractor to this Release.

State of:_____
County of:_____

On this _____ day of _____, _____, before me appeared (name) _____, as (office) _____ of (name of Firm) _____, who, being duly sworn, did execute the foregoing affidavit, and who is personally known by me or who presented (type of identification) _____, and who did take an oath.

(Seal)

Notary Public:_____

Printed Name:_____

Commission Expires:_____

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SECTION 00 65 19.33 - SUBCONTRACTOR FINAL RELEASE FORM

GREATER ORLANDO AVIATION AUTHORITY

KNOW ALL PERSONS BY THESE PRESENTS, that the undersigned, conditioned upon payment of the sum of _____ DOLLARS ($_____) (final total Contract amount), paid by the Contractor does hereby fully and completely discharge and release the Greater Orlando Aviation Authority from and waives any and all debts, accounts, promises, damages, liens, encumbrances, causes of action, suits, bonds, judgments, claims and demands whatsoever, in law or in equity, which the undersigned ever had, now has or might hereafter have on account of labor performed, material fumished or services rendered, directly or indirectly, for the Project known as " BP-S00195, , Orlando International Airport," except for those Claims made in accordance with the Contract Documents prior to this date and identified by the Contractor as unsettled in the Contractor's final Application for Payment.

This Final Release and Waiver is conditioned upon receipt of the final payment from the Contractor in the amount of _____ Dollars ($_____) and is not effective until that payment is received.

The undersigned further covenants that all sub-subcontractors, suppliers, materialmen and any or all other persons supplying material, supplies, services or labor used, directly or indirectly, on or for the Project have been paid in full.

The undersigned shall maintain in full force and effect all guaranties against defective work, and any other special guaranties required by the Subcontract.

The undersigned represents and warrants that the statements contained in the foregoing Release are true and correct.

IN WITNESS WHEREOF, I hereunto set my hand and seal this ____ day of _____, _____

WITNESSES:

_____

_____

_____
SUB CONTRACTOR

By:_____

Title:_____

(CORPORATE SEAL)
(If Applicable)

Final Release Form must be signed by a corporate officer or such other representative of the Sub Contractor with authority to bind the Sub Contractor to this Release.

State of:_____
County of:_____

On this _____ day of _____, _____, before me appeared (name) _____, as (office) _____ of (name of Firm) _____, who, being duly sworn, did execute the foregoing affidavit, and who is personally known by me or who presented (type of identification) _____, and who did take an oath.

(Seal)

Notary Public:_____

Printed Name:_____

Commission Expires:_____

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SECTION 00 73 00 – SUPPLEMENTARY CONDITIONS

The following supplements modify the "General Provisions." Where a portion of the General Provisions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Provisions shall remain in effect.

~~DISPUTE REVIEW BOARD Modifications to the General Provisions:~~

~~Replace the first paragraph in Article 4. RESOLUTION OF DISPUTES in Section 50-28 of the General Provisions with the following:~~

~~Any Claim, dispute or other matter in question arising out of or relating to the Contract Documents or the breach thereof, if not resolved by the parties at the time such Claim or dispute arises, shall be subject to the Dispute Review Board process identified in Section 00 73 83.13 of the Contract Documents, which process, conditions and procedures are incorporated herein by reference. The Dispute Review Board process shall be a condition precedent to any party filing legal action. Following the conclusion of the Dispute Review Board process, unresolved Claims shall be brought only in the Circuit Court of the Ninth Judicial Circuit in and for Orange County, Florida.~~

~~LOCAL DEVELOPING BUSINESS (LDB) Modifications to the General Conditions:~~

~~If the Designated Mobilization Payments (DMP) program applies, add the following to the end of Section 90-05 APPLICATION AND CERTIFICATE OF PAYMENT:~~

~~Each Application for Payment shall contain separate line items that are located on the front cover of each Application for Payment for DMP to LDB Contractors, in accordance with Section 90-05.~~

~~Add the following paragraph:~~

~~If the Contractor or Subcontractor is certified as a LDB, as that term is defined in the Owner's policies, the Contractor or Subcontractor shall be eligible to receive a Designated Mobilization Payment equal to five percent (5%) of the Total Contract Price, or if approved by the Owner, such greater amount not to exceed ten percent (10%) of the Total Contract Price. However, the Contractor or Subcontractor shall only be entitled to receive the Designated Mobilization Payment, in the form of a certificate of deposit purchased by the Owner, in the name of the qualifying LDB entity, from a lending institution participating in the LDB working capital initiative, and upon satisfaction of the following conditions:~~

~~(a) The Contractor has established a working capital line of credit agreement ("Working Capital Agreement"), as that term is utilized in the LDB Policy, with a lending institution participating in the LDB working capital initiative as set forth in the LDB Policy;~~

~~(b) The Contractor or Subcontractor has requested payment of the Designated Mobilization Payment in an Application for Payment accompanied by a properly executed Working Capital Agreement with a participating lending institution;~~

~~(c) The Owner has issued a Notice To Proceed to the Contractor;~~

~~(d) The Owner shall have ten (10) business days after approval of the Contractor's Application for Payment within which to issue the Designated Mobilization Payment. The Owner may issue (as provided below) the Designated Mobilization Payment prior to the commencement of the Work at the Project site;~~

~~(e) The Contractor or Subcontractor shall pledge (as that term is defined under the Working Capital Agreement) the Designated Mobilization Payment as collateral with a participating lending institution under a Working Capital Agreement;~~

~~(f) The Contractor or Subcontractor shall provide the Owner with proof that the Contractor is participating in the Owner's technical assistance program as that program is described in the Owner's LDB Policy;~~

~~(g) The Designated Mobilization Payment is at least $4,000 and does not exceed $200,000, regardless of the Total Contract Price; and~~

~~(h) The Contractor or Subcontractor has not entered into an assignment of the Contract proceeds to obtain a line of credit from a non-participating lending institution.~~

END OF SECTION 00 73 00

~~(e) The Contractor or Subcontractor shall pledge (as that term is defined under the Working Capital Agreement) the Designated Mobilization Payment as collateral with a participating lending institution under a Working Capital Agreement;~~

~~(f) The Contractor or Subcontractor shall provide the Owner with proof that the Contractor is participating in the Owner's technical assistance program as that program is described in the Owner's LDB Policy;~~

~~(g) The Designated Mobilization Payment is at least $4,000 and does not exceed $200,000, regardless of the Total Contract Price; and~~

~~(h) The Contractor or Subcontractor has not entered into an assignment of the Contract proceeds to obtain a line of credit from a non-participating lending institution.~~

END OF SECTION 00 73 00

SECTION 00 73 19.13 - HAZARDOUS MATERIALS

PART 1 - GENERAL

1.1. SECTION INCLUDES

A. Alerting Contractors against the presence of hazardous materials in certain items in the building and alerting against the use of hazardous materials.

1.2. DEFINITION

A. As used in this Section, Hazardous Materials shall mean any hazardous substance as defined in 42 USC Section 9601 or regulations adopted pursuant to that Section or any material listed on the Florida Substance List required by Section 442.103, Florida Statutes.

1.3. CONSTRUCTION

A. Asbestos, asbestos containing material, lead or other hazardous materials are not allowed during the construction of new work or renovations at the Airport.

B. The Contractor will identify hazardous materials that are currently used in the construction process and in the way of new construction and shall seek specific approval, both as to the type of hazardous material and as to limits of usage, from the Owner.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 00 73 19.13

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SECTION 00 73 83.13 - DISPUTE REVIEW BOARD

1.0 OVERVIEW

1.1 A Dispute Review Board (DRB) will be established for this Project to assist in the resolution of disputes arising out of the Work. This Section 00 73 83.13 describes the purpose, procedure, function and features of the DRB.

1.2 The role of the DRB is to issue independent advisory opinions by skilled construction professionals knowledgeable about the Work that evaluate claims and disputes with the purpose of facilitating negotiated resolutions by the Contracting Parties themselves.

1.3 The DRB will provide special expertise to assist and facilitate the timely and equitable resolution of disputes and controversies between the Owner and the Contractor ("Contracting Parties"). The DRB is not intended as a substitute for the Contracting Parties to proceed in good faith to cooperate with each other and to resolve fairly and expeditiously disputes that arise during the performance of the Work. The Contracting Parties are to make every reasonable effort to resolve disputes before submitting them to the DRB.

1.4 The DRB will be used when the procedure for resolving disputes, as set forth in the Contract Documents and this Section 00 73 83.13, is unsuccessful. The submission to the DRB of any unresolved dispute is a condition precedent to litigation or arbitration of the unresolved dispute. The term of the DRB shall commence at the issuance of the Notice to Proceed or after the three (3) DRB members have been selected in accordance with Section 2.0, whichever is later, and shall continue until Final Payment.

1.5 The DRB will fairly and impartially consider the disputes referred to it and will provide written advisory opinions to assist in the resolution of the disputes by the Contracting Parties. The advisory opinions of the DRB will not be binding on any of the Contracting Parties and will not be admissible in any subsequent legal proceeding or arbitration.

1.6 During the dispute resolution process, the Contractor will continue with the Work in accordance with the Contract Documents in a diligent manner and without delay. With respect to the Work that is the subject of a dispute, the Contractor will keep complete records of extra costs and time incurred in accordance with the Force Account provisions of the Contract Documents. In accordance with the Contract Documents, the Contractor will permit the Owner, its designated representatives and the DRB access to any records needed for evaluating the dispute, without any claim of privilege or confidentiality. Such access will be provided after reasonable notice. The actual, reasonable costs of printing or copying records will be paid by the party requesting the copies; the cost of collecting or reviewing the records prior to production shall be paid by the producing Contracting Party.

1.7 An agreement will be entered into between the Owner, Contractor and DRB members that incorporates the terms and procedures set forth in this Section 00 73 83.13. A copy of this agreement, titled Three Party Agreement, is located in Section 00 73 83.19.

2.0 DRB MEMBERSHIP

2.1 The DRB will consist of three members. One member shall be selected by the Owner and approved by the Contractor, and one member shall be selected by the Contractor and approved by the Owner. The first two members shall select and agree on the third member. Normally, the third member will at all times serve as Chair for all DRB activities. If the third member of the DRB declines to act as Chair, then the

~~chairmanship shall be alternated with the Owner's selected member assuming this position at the first resolution meeting.~~

~~2.2 The Contracting Parties shall provide notice of their member selection ("Notice of Member Selection") within fourteen (14) calendar days after issuance of the Notice to Proceed; the Contracting Parties shall serve objections, if any, concerning the other Contracting Party's member selection within seven (7) calendar days after the Notice of Member Selection. Any objected to member selection shall be replaced with a new member selection within seven (7) calendar days after the objection is served; the Contracting Parties shall serve objections, if any, concerning the replacement member selection within seven (7) calendar days after the replacement member selection; this process may be repeated as needed. The two (2) members selected by the Owner and the Contractor that are not objected to shall, within fourteen (14) calendar days after the last objection period expires, jointly select the third member and provide notice to the Contracting Parties; the Contracting Parties shall serve objections, if any, concerning this member selection within seven (7) calendar days after that notice. Any objected to member shall be replaced with a new member selection within seven (7) calendar days after the objection is served; the Contracting Parties shall serve objections, if any, concerning the replacement member selection within seven (7) calendar days after the selection of the replacement member; this process may be repeated as needed. If three (3) DRB members, because of an impasse, are not empaneled within ninety (90) calendar days after the issuance of the Notice to Proceed, then the Contracting Parties shall engage, and equally share the cost of, a mediator skilled in construction disputes to assist in empaneling three (3) members, with the goal of accomplishing this as quickly as possible. If already empaneled, all three members shall attend the Pre-Construction Meeting.~~

~~2.3 All DRB members shall be experienced with the type of construction methods associated with the Project, in the interpretation of contract documents and in contract dispute resolution. The goal in selecting the third member is to complement the construction experience of the first two members and to provide leadership to the DRB's activities. It is imperative that DRB members show no partiality to either the Contractor or the Owner or have any conflict of interest.~~

~~2.4 The criteria and limitations for membership will be as follows:~~

- ~~A. The members selected will have no direct or indirect ownership or financial interest in the Contractor, the OAR, the Designer (i.e., the Architect or Engineer of the Project), any subcontractor or supplier of the Project or the employer of other DRB members.~~
- ~~B. Except for services as a DRB member of the Owner's projects, no member shall have been an employee, contractor or consultant to the Contractor or the Owner, the OAR, the Designer, any subcontractor or supplier of the Project within a period of five (5)years prior to the date of the Notice of Intent to Award Contract.~~
- ~~C. No member shall have had a personal, professional or business relationship with the Owner or the Contractor or either's subcontractors or subconsultants of the Project (or an employee or officer of the Owner or the Contractor) of a nature which could be construed to compromise the ability to impartially issue advisory opinions concerning claims or disputes.~~
- ~~D. No member shall have had any prior involvement in the Project (other than as a DRB member) of a nature which could be construed to compromise the ability to impartially issue advisory opinions concerning claims or disputes.~~
- ~~E. No member shall be employed by the Contractor or the Owner, the OAR, the Designer, or any subcontractor or supplier of the Project during the term of the Contract, except as a DRB member pursuant to the Three Party Agreement or as a DRB member on another project.~~
- ~~F. During the term of the Contract, no discussion or agreement shall be made between a DRB member and Owner or the Contractor regarding employment after the Contract is completed.~~
- ~~G. During the term of the Contract, ex parte communications between a DRB member and the Owner or the Contractor or either's subcontractors or subconsultants of the project are~~

~~chairmanship shall be alternated with the Owner's selected member assuming this position at the first resolution meeting.~~

~~2.2 The Contracting Parties shall provide notice of their member selection ("Notice of Member Selection") within fourteen (14) calendar days after issuance of the Notice to Proceed; the Contracting Parties shall serve objections, if any, concerning the other Contracting Party's member selection within seven (7) calendar days after the Notice of Member Selection. Any objected to member selection shall be replaced with a new member selection within seven (7) calendar days after the objection is served; the Contracting Parties shall serve objections, if any, concerning the replacement member selection within seven (7) calendar days after the replacement member selection; this process may be repeated as needed. The two (2) members selected by the Owner and the Contractor that are not objected to shall, within fourteen (14) calendar days after the last objection period expires, jointly select the third member and provide notice to the Contracting Parties; the Contracting Parties shall serve objections, if any, concerning this member selection within seven (7) calendar days after that notice. Any objected to member shall be replaced with a new member selection within seven (7) calendar days after the objection is served; the Contracting Parties shall serve objections, if any, concerning the replacement member selection within seven (7) calendar days after the selection of the replacement member; this process may be repeated as needed. If three (3) DRB members, because of an impasse, are not empaneled within ninety (90) calendar days after the issuance of the Notice to Proceed, then the Contracting Parties shall engage, and equally share the cost of, a mediator skilled in construction disputes to assist in empaneling three (3) members, with the goal of accomplishing this as quickly as possible. If already empaneled, all three members shall attend the Pre-Construction Meeting.~~

~~2.3 All DRB members shall be experienced with the type of construction methods associated with the Project, in the interpretation of contract documents and in contract dispute resolution. The goal in selecting the third member is to complement the construction experience of the first two members and to provide leadership to the DRB's activities. It is imperative that DRB members show no partiality to either the Contractor or the Owner or have any conflict of interest.~~

~~2.4 The criteria and limitations for membership will be as follows:~~

- ~~A. The members selected will have no direct or indirect ownership or financial interest in the Contractor, the OAR, the Designer (i.e., the Architect or Engineer of the Project), any subcontractor or supplier of the Project or the employer of other DRB members.~~
- ~~B. Except for services as a DRB member of the Owner's projects, no member shall have been an employee, contractor or consultant to the Contractor or the Owner, the OAR, the Designer, any subcontractor or supplier of the Project within a period of five (5)years prior to the date of the Notice of Intent to Award Contract.~~
- ~~C. No member shall have had a personal, professional or business relationship with the Owner or the Contractor or either's subcontractors or subconsultants of the Project (or an employee or officer of the Owner or the Contractor) of a nature which could be construed to compromise the ability to impartially issue advisory opinions concerning claims or disputes.~~
- ~~D. No member shall have had any prior involvement in the Project (other than as a DRB member) of a nature which could be construed to compromise the ability to impartially issue advisory opinions concerning claims or disputes.~~
- ~~E. No member shall be employed by the Contractor or the Owner, the OAR, the Designer, or any subcontractor or supplier of the Project during the term of the Contract, except as a DRB member pursuant to the Three Party Agreement or as a DRB member on another project.~~
- ~~F. During the term of the Contract, no discussion or agreement shall be made between a DRB member and Owner or the Contractor regarding employment after the Contract is completed.~~
- ~~G. During the term of the Contract, ex parte communications between a DRB member and the Owner or the Contractor or either's subcontractors or subconsultants of the project are~~

prohibited concerning the Project or any dispute arising out of the Project, including solicitation of any DRB member's advice or consultation concerning the Project.

2.5 Before appointments are final, the first two prospective members will submit complete disclosure statements to the Contracting Parties. The disclosure statement shall conform to the form attached as an Exhibit to these Specifications. Each disclosure statement will include the prospective member's experience and a declaration describing all past, present and anticipated or planned future relationships to the Project and with the Contracting Parties, the OAR, Consultants or any subcontractor or supplier of the Project. The third DRB member will supply a disclosure similar to the first two DRB members and to the Contracting Parties before the third member appointment is finalized. The Contracting Parties' DRB members will ensure that the third member meets all of the selection criteria listed above. A DRB member must update the disclosure statement if the member discovers circumstances, or if events occur, that would disqualify the DRB member under Section 2.4, above, or that would change a DRB member's responses to the disclosure statement; in any event, each DRB member must update the disclosure statement annually or as requested by the Owner.

2.6 If for any reason a DRB member fails or is unable to serve, or violates any of the criteria in Section 2.4 (e.g., failing to disclose a relationship), the Chair (or failing the action of the Chair, then either of the other members) shall inform the Contracting Parties and such non-serving member shall be replaced in the same manner as the member being replaced was selected. A DRB member may withdraw from the DRB upon not less than four (4) weeks' written notice to the Contracting Parties and to the other DRB members. A DRB member may be removed for or without cause by his or her original appointer or appointers; the Owner may remove the Owner-appointed DRB member, the Contractor may remove the Contractor-appointed member, and the Owner/Contractor-appointed members may jointly agree to remove the third member; this procedure applies except in the case of a conflict of interest, in which case the Contracting Parties may jointly agree to remove the DRB member in question. If the Contracting Parties disagree concerning whether a disclosure or conflict of interest renders a DRB member unable to serve by the criteria in Section 2.4, then the DRB member in question may be removed for cause upon the vote of one (1) of the Contracting Parties and the two (2) other DRB members, bearing in mind that the appearance of bias or impropriety by any DRB member may undermine the DRB process. The replacement DRB member shall be selected in the same manner as required by Section 2.2 above, except that if a removed member is not replaced within forty-five (45) calendar days after removal, and the delay is the result of an impasse, then the Contracting Parties shall engage, and equally share the cost of, a mediator skilled in construction disputes to assist in replacing the removed member. The removed DRB member shall not be entitled to additional compensation under the Three-Party Agreement, unless the Owner determines, in its sole discretion, that equitable circumstances exist to justify payment. Replacement shall be considered completed when a replacement DRB member executes the Three Party Agreement.

3.0 DRB PROCEDURES

3.1 The DRB will formulate procedures of operation that shall be flexible with respect to the functioning of the DRB and consistent with the existing procedures for contract administration. The DRB shall circulate proposed procedures of operation within fourteen (14) calendar days after the first meeting; within seven (7) calendar days of receiving the proposed procedures of operation, the Contracting Parties shall review the proposed procedures of operation and circulate to the DRB and to each other any proposed changes or comments. The DRB may, within its discretion, consider, accept, or discard any of the Contracting Parties' proposed changes and comments, and shall circulate official procedures of operation within twenty-eight (28) calendar days after the first meeting; however, the Contracting Parties may by written agreement determine certain or all procedures of operation. The DRB may, from time to time, revise its procedures of operation within its discretion, whether on the DRB's own initiative, or at the request of any of the Contracting Parties. To the extent that the procedures of operation adopted by the DRB conflict with the Contract Documents, the Contract Documents prevail.

~~3.2 Each DRB member shall be provided a complete set of the Contract Documents. The Contracting Parties shall, before each DRB meeting, if requested by the DRB members, provide each member with copies of biweekly or monthly reports already in use on the Project. In consultation with the DRB, the Contracting Parties may also agree to provide other reports, documents or submittals generated in connection with administering the Contract Documents (e.g., requests for change orders, etc.).~~

~~3.3 The DRB will visit the Project once a month during the first three months of construction of the Project unless the Owner and Contractor decide otherwise. The Owner and Contractor shall together have the discretion to determine the frequency of meetings thereafter, unless a meeting is required to hear a disputed issue that could not be otherwise resolved by the Contracting Parties. The regularly scheduled meetings will typically be scheduled in connection with the Owner's Job Coordination Meetings (JCMs).~~

~~3.4 Each regularly scheduled DRB meeting will consist of an informal discussion of project progress and issues, and a field inspection of the Work. The DRB meetings will be attended by the DRB and representatives from the Owner and the Contractor. The field inspections will cover all active segments of the Work. The DRB will be accompanied by representatives of both the Owner and the Contractor during each field inspection. Soliciting any DRB member's advice or consultation regarding the Work or the Contract is expressly prohibited unless all Contracting Parties are present for such purposes.~~

~~3.5 After the first three regularly scheduled meetings, subsequent meetings do not have to take place at the Project site. The location and frequency of subsequent meetings will be agreed upon by the Owner, the Contractor and the DRB depending upon the progress of the Work. Each meeting will consist of an informal round table discussion and, if necessary, a field inspection of the Work. The round table discussions may include presentations from each of the Contracting Parties to the DRB addressing, without limitation, the following items: construction work accomplished since the last meeting, current status of the Work, the current and future schedule, payment status, potential future problems that may come before the DRB, proposed solutions to those problems, and an update regarding previously handled or ongoing problems. The Agenda for regularly scheduled meetings of the DRB will generally include the following:~~

- ~~A. Meeting opened by the Chair of the DRB.~~
- ~~B. Description by the Contractor of the work accomplished since the last meeting, current status of the work schedule, anticipated work to be completed prior to the next scheduled DRB meeting, potential problems and proposed solutions.~~
- ~~C. Discussion by the Owner of work schedule, potential problems and any general observations of issues that might possibly become problems or disputes.~~
- ~~D. Update by DRB on status of its advisory opinion of the resolution of a pending disputed matter, if applicable.~~
- ~~E. If there is a new dispute, initial discussion commences with remarks by the Contracting Party raising the dispute, summarizing the issues involved and that Contracting Party's requested resolution. The other Contracting Party will then respond with their positions. The DRB may request additional information from the Parties regarding the dispute.~~
- ~~F. If there is an ongoing dispute that has not yet been resolved, each Contracting Party shall address information previously requested by the DRB followed by the responses of the other Contracting Party.~~
- ~~G. If the Contracting Parties have reached an impasse over resolution of the dispute, the DRB shall set the date and time for a DRB Hearing on the dispute, in accordance with Section 4.0 below.~~
- ~~H. Set a place, date and time for next regularly scheduled DRB meeting.~~
- ~~I. A site visit may be conducted, at the discretion of the DRB, which shall be accompanied by both Contracting Parties.~~

~~3.6 During the regularly scheduled meetings, the DRB shall be provided, by the Owner, with an administrative assistant who shall prepare meeting minutes and circulate them for comments, revisions and/or approval by all concerned.~~

~~3.2 Each DRB member shall be provided a complete set of the Contract Documents. The Contracting Parties shall, before each DRB meeting, if requested by the DRB members, provide each member with copies of biweekly or monthly reports already in use on the Project. In consultation with the DRB, the Contracting Parties may also agree to provide other reports, documents or submittals generated in connection with administering the Contract Documents (e.g., requests for change orders, etc.).~~

~~3.3 The DRB will visit the Project once a month during the first three months of construction of the Project unless the Owner and Contractor decide otherwise. The Owner and Contractor shall together have the discretion to determine the frequency of meetings thereafter, unless a meeting is required to hear a disputed issue that could not be otherwise resolved by the Contracting Parties. The regularly scheduled meetings will typically be scheduled in connection with the Owner's Job Coordination Meetings (JCMs).~~

~~3.4 Each regularly scheduled DRB meeting will consist of an informal discussion of project progress and issues, and a field inspection of the Work. The DRB meetings will be attended by the DRB and representatives from the Owner and the Contractor. The field inspections will cover all active segments of the Work. The DRB will be accompanied by representatives of both the Owner and the Contractor during each field inspection. Soliciting any DRB member's advice or consultation regarding the Work or the Contract is expressly prohibited unless all Contracting Parties are present for such purposes.~~

~~3.5 After the first three regularly scheduled meetings, subsequent meetings do not have to take place at the Project site. The location and frequency of subsequent meetings will be agreed upon by the Owner, the Contractor and the DRB depending upon the progress of the Work. Each meeting will consist of an informal round table discussion and, if necessary, a field inspection of the Work. The round table discussions may include presentations from each of the Contracting Parties to the DRB addressing, without limitation, the following items: construction work accomplished since the last meeting, current status of the Work, the current and future schedule, payment status, potential future problems that may come before the DRB, proposed solutions to those problems, and an update regarding previously handled or ongoing problems. The Agenda for regularly scheduled meetings of the DRB will generally include the following:~~

- ~~A. Meeting opened by the Chair of the DRB.~~
- ~~B. Description by the Contractor of the work accomplished since the last meeting, current status of the work schedule, anticipated work to be completed prior to the next scheduled DRB meeting, potential problems and proposed solutions.~~
- ~~C. Discussion by the Owner of work schedule, potential problems and any general observations of issues that might possibly become problems or disputes.~~
- ~~D. Update by DRB on status of its advisory opinion of the resolution of a pending disputed matter, if applicable.~~
- ~~E. If there is a new dispute, initial discussion commences with remarks by the Contracting Party raising the dispute, summarizing the issues involved and that Contracting Party's requested resolution. The other Contracting Party will then respond with their positions. The DRB may request additional information from the Parties regarding the dispute.~~
- ~~F. If there is an ongoing dispute that has not yet been resolved, each Contracting Party shall address information previously requested by the DRB followed by the responses of the other Contracting Party.~~
- ~~G. If the Contracting Parties have reached an impasse over resolution of the dispute, the DRB shall set the date and time for a DRB Hearing on the dispute, in accordance with Section 4.0 below.~~
- ~~H. Set a place, date and time for next regularly scheduled DRB meeting.~~
- ~~I. A site visit may be conducted, at the discretion of the DRB, which shall be accompanied by both Contracting Parties.~~

~~3.6 During the regularly scheduled meetings, the DRB shall be provided, by the Owner, with an administrative assistant who shall prepare meeting minutes and circulate them for comments, revisions and/or approval by all concerned.~~

~~3.7 The Contracting Parties are strongly encouraged to participate in both regularly scheduled DRB meetings and DRB hearings without the presence of legal counsel, although each Contracting Party is free to consult with, without limitation, legal counsel, consultants, and technical experts before or after the meetings to prepare for or respond to DRB meeting issues. The presence of legal counsel is strongly disfavored and diminishes the efficacy of the DRB process. Legal counsel may not make presentations on behalf of the Contracting Parties, or address the DRB, unless the Contracting Parties involved in the dispute agree otherwise. If a Contracting Party intends to have legal counsel attend a DRB meeting or hearing, that Contracting Party shall notify the other Contracting Party and the DRB of that intention at least three (3) calendar days prior to the meeting or hearing; the other Contracting Parties involved in the dispute may respond promptly concerning whether they will also have legal counsel present.~~

~~4.0 RESOLUTION OF DISPUTES~~

~~4.1 Disputes will be considered as quickly as possible, taking into consideration the particular circumstances and the time required to prepare detailed documentation. Steps may be omitted as agreed by the Contracting Parties and the time periods stated below may be shortened in order to hasten resolution or lengthened when the issues are complex.~~

~~A. If the Owner or Contractor objects to any final decision or position by the other regarding any claim or change order request or other action, and all avenues for resolving such objections by direct negotiation have been exhausted, then either Contracting Party may file a written request for hearing to the DRB, stating clearly the specific issue to be addressed by the DRB, the basis for the Contracting Party's objection to the final decision made by the other Contracting Party, and the requested relief sought in the advisory opinion of the DRB.~~

~~B. Upon receipt by the DRB of a written request for hearing, the DRB will first decide when and where to conduct the meeting to hear the dispute. For an urgent matter, the DRB will meet at its earliest convenience.~~

~~C. Prior to each DRB hearing on a disputed issue, each Contracting Party shall submit a Position Paper to the DRB which provides details of the dispute, the issues involved and that Contracting Party's requested resolution. A Contracting Party furnishing written documentation to the DRB shall also furnish copies of such information to the other Contracting Parties involved in the dispute. Initial written documentation will be furnished a minimum of twenty-one (21) calendar days prior to the date the DRB sets the meeting to hear the dispute. A Contracting Party may respond to the Position Papers submitted by the other Contracting Party with a Rebuttal which shall be submitted to the DRB and the other Contracting Party a minimum of ten (10) calendar days prior to the DRB meeting. If the DRB requests additional documentation prior to, during or after the meeting, the appropriate Contracting Party will provide the requested information to the DRB and to the other Contracting Party. All written documentation provided and any written statements by the DRB and the participants shall be and remain settlement negotiations and shall not be admissible in any subsequent legal proceeding or arbitration, except for the limited purpose of demonstrating the performance of a condition precedent, and only to the extent necessary for that purpose; furthermore, each participant and the DRB shall not disseminate the written documentation or statements except to the DRB participants and their representatives or consultants or counsel (and except as may by required by applicable law).~~

~~D. The DRB's initial advisory opinion concerning entitlement must be provided to the Contracting Parties in writing within twenty-eight (28) calendar days after completion of the hearing(s). If the Contracting Parties agree, the DRB may be granted additional time to formulate its advisory opinion concerning entitlement in cases of extreme complexity.~~

~~E. Unless otherwise agreed by the Contracting Parties, the DRB's initial advisory opinion shall address matters of entitlement only, addressing whether, under the Contract Documents, relief is appropriate, and along with the other aspects of entitlement, whether each aspect of any claim or~~

dispute has been timely noticed, substantiated, and, if applicable, certified as required by the Contract Documents.

F. Within twenty-eight (28) calendar days after receiving the DRB's initial advisory opinion, the Contracting Parties involved in the dispute shall accept or reject the DRB's initial advisory opinion in writing, with notice of the acceptance or rejection to all Contracting Parties and the DRB. The failure of a Contracting Party to respond within this thirty (30) calendar day period will be deemed a rejection by such Contracting Party of the DRB's advisory opinion.

G. If the DRB determines that there is no entitlement, then the DRB process shall be complete as to the claim or dispute in question and the Contracting Parties involved in the dispute may, in light of the DRB's determination, continue to attempt to negotiate a full resolution of the dispute or otherwise seek recourse as to the claim or dispute in accordance with the Contract.

H. If the DRB determines that there is entitlement, the Contracting Parties shall carefully consider the DRB's advisory opinion and attempt to negotiate a full resolution of the dispute. If the Contracting Parties cannot agree on an amicable resolution of the dispute within forty-five (45) calendar days after the receipt of the DRB's initial written advisory opinion, then either Contracting Party may request that the DRB issue a final advisory opinion to address the entire dispute in accordance with the Contract, including an advisory opinion proposing equitable adjustment to the Contract and/or an extension or reduction of time, if applicable. The DRB will then schedule an additional hearing to facilitate the rendition of a final advisory opinion.

I. Prior to each such additional DRB hearing, each Contracting Party shall submit a Position Paper and Rebuttal to the DRB which provides details of the proposed final resolution of the dispute, based on the DRB's initial advisory opinion regarding entitlement, following the procedure and timeline described above in Paragraph C.

J. The DRB's final advisory opinion must be provided to the Contracting Parties involved in the dispute in writing within twenty-eight (28) calendar days after the completion of each such additional DRB hearing.

K. Within forty-five (45) calendar days after receiving the DRB's final advisory opinion, the Contracting Parties shall accept or reject the DRB's final advisory opinion in writing, with notice of the acceptance or rejection to the Contracting Parties and the DRB. The failure of a Contracting Party to respond within the forty-five (45) calendar day period will be deemed a rejection by such Contracting Party of the DRB's final advisory opinion.

    a. If the Contracting Parties involved in the dispute are able to resolve the dispute (with or without the aid of the DRB's advisory opinions), then the Owner will promptly process any required Contract Modification.

L. If the DRB's final advisory opinion is rejected by a Contracting Party, then any Contracting Party may seek recourse in accordance with the Contract.

4.2 The Owner and the Contractor shall have representatives at all dispute resolution hearings. The Contracting Party requesting the DRB hearing will first discuss the dispute, followed by the other Contracting Party. Each Contracting Party will then be allowed successive rebuttals until all aspects are fully covered. The DRB members and the Contracting Parties may ask questions, request clarification or ask for additional data. In large or complex cases, additional meetings may be necessary in order to consider and fully understand all of the information presented by both Contracting Parties. During the meetings, no DRB member will express any opinion concerning the merit of any facet of the dispute.

4.3 After the DRB hearing is concluded, the DRB will meet in private to formulate advisory opinions supported by two (2) or more members. As set forth above, the DRB's advisory opinion must be in writing and provided to both Contracting Parties. The advisory opinion shall be based on the pertinent Contract provisions, the documents submitted and the facts and circumstances involved in the dispute.

4.4 The DRB will make every effort to issue unanimous advisory opinions. If a unanimous advisory opinion is not possible, the dissenting member may, but is not required to, prepare a minority advisory opinion.

~~dispute has been timely noticed, substantiated, and, if applicable, certified as required by the Contract Documents.~~

~~F. Within twenty-eight (28) calendar days after receiving the DRB's initial advisory opinion, the Contracting Parties involved in the dispute shall accept or reject the DRB's initial advisory opinion in writing, with notice of the acceptance or rejection to all Contracting Parties and the DRB. The failure of a Contracting Party to respond within this thirty (30) calendar day period will be deemed a rejection by such Contracting Party of the DRB's advisory opinion.~~

~~G. If the DRB determines that there is no entitlement, then the DRB process shall be complete as to the claim or dispute in question and the Contracting Parties involved in the dispute may, in light of the DRB's determination, continue to attempt to negotiate a full resolution of the dispute or otherwise seek recourse as to the claim or dispute in accordance with the Contract.~~

~~H. If the DRB determines that there is entitlement, the Contracting Parties shall carefully consider the DRB's advisory opinion and attempt to negotiate a full resolution of the dispute. If the Contracting Parties cannot agree on an amicable resolution of the dispute within forty-five (45) calendar days after the receipt of the DRB's initial written advisory opinion, then either Contracting Party may request that the DRB issue a final advisory opinion to address the entire dispute in accordance with the Contract, including an advisory opinion proposing equitable adjustment to the Contract and/or an extension or reduction of time, if applicable. The DRB will then schedule an additional hearing to facilitate the rendition of a final advisory opinion.~~

~~I. Prior to each such additional DRB hearing, each Contracting Party shall submit a Position Paper and Rebuttal to the DRB which provides details of the proposed final resolution of the dispute, based on the DRB's initial advisory opinion regarding entitlement, following the procedure and timeline described above in Paragraph C.~~

~~J. The DRB's final advisory opinion must be provided to the Contracting Parties involved in the dispute in writing within twenty-eight (28) calendar days after the completion of each such additional DRB hearing.~~

~~K. Within forty-five (45) calendar days after receiving the DRB's final advisory opinion, the Contracting Parties shall accept or reject the DRB's final advisory opinion in writing, with notice of the acceptance or rejection to the Contracting Parties and the DRB. The failure of a Contracting Party to respond within the forty-five (45) calendar day period will be deemed a rejection by such Contracting Party of the DRB's final advisory opinion.~~

~~a. If the Contracting Parties involved in the dispute are able to resolve the dispute (with or without the aid of the DRB's advisory opinions), then the Owner will promptly process any required Contract Modification.~~

~~L. If the DRB's final advisory opinion is rejected by a Contracting Party, then any Contracting Party may seek recourse in accordance with the Contract.~~

~~4.2 The Owner and the Contractor shall have representatives at all dispute resolution hearings. The Contracting Party requesting the DRB hearing will first discuss the dispute, followed by the other Contracting Party. Each Contracting Party will then be allowed successive rebuttals until all aspects are fully covered. The DRB members and the Contracting Parties may ask questions, request clarification or ask for additional data. In large or complex cases, additional meetings may be necessary in order to consider and fully understand all of the information presented by both Contracting Parties. During the meetings, no DRB member will express any opinion concerning the merit of any facet of the dispute.~~

~~4.3 After the DRB hearing is concluded, the DRB will meet in private to formulate advisory opinions supported by two (2) or more members. As set forth above, the DRB's advisory opinion must be in writing and provided to both Contracting Parties. The advisory opinion shall be based on the pertinent Contract provisions, the documents submitted and the facts and circumstances involved in the dispute.~~

~~4.4 The DRB will make every effort to issue unanimous advisory opinions. If a unanimous advisory opinion is not possible, the dissenting member may, but is not required to, prepare a minority advisory opinion.~~

4.5 The fact that the DRB considered the dispute, the qualifications of the DRB members, the DRB's advisory opinion, the DRB meetings, whether the Contracting Parties accepted or rejected the DRB's advisory opinion and all information submitted or statements made in connection with the DRB process are settlement negotiations and are not admissible in any subsequent legal proceeding or arbitration, except for the limited purpose of demonstrating the performance of a condition precedent, and only to the extent necessary for that purpose.

4.6 In the absence of a change order or written agreement signed by the Contracting Parties, no advisory opinion of the DRB, whether initial or final or of any other form, is binding on the Contracting Parties in any way, even if all Contracting Parties accept the advisory opinion(s).

4.7 A request for reconsideration or clarification may be submitted to the DRB within fourteen (14) calendar days after the issuance of the advisory opinion but only if either of the following two conditions exist. Reconsideration and clarification should be in the exception, not the rule, and shall be granted sparingly within the DRB's sole discretion. Reconsideration shall not be granted merely so that a Contracting Party may repeat the same arguments or present arguments available to it when the dispute was heard initially.

A. Clarification. Should the dispute remain unresolved because of a bona fide lack of clear understanding of the DRB's advisory opinion, a Contracting Party may request that the DRB clarify specified portions of its advisory opinion. The request shall only specify the item where clarity is sought, and shall not involve renewed argument.

B. Reconsideration. A Contracting Party may request that the DRB reconsider a dispute upon the submission of new evidence or if it appears that the DRB clearly misunderstood or failed to consider relevant, material facts.

4.8 A request for reconsideration or clarification submitted prior to any deadline to take action with respect to an advisory opinion shall suspend all such deadlines for all Contracting Parties with respect to the advisory opinion in question; the DRB shall, with input from the Contracting Parties, determine and communicate new deadlines.

5.0 FEES AND EXPENSES OF DRB MEMBERS

5.1 The Owner and Contractor shall equally share the fees and expenses of all three DRB members for services rendered under the Three Party Agreement. The Owner shall provide a monetary allowance as indicated on the Bid or Proposal Form for its estimated share of the DRB fees and expenses. The Contractor shall include in its Bid or Proposal Price the amount the Contractor estimates is needed for its share of such fees and expenses. Should the Owner's total pro-rata share exceed the allowance during the performance of the DRB process, then the Owner shall process a change order to pay its additional share with the Contractor paying its additional share from its own funds. The Owner shall not be responsible for paying the Contractor's share of the DRB fees and expenses.

5.2 The Owner or the OAR will prepare for review and deliver to the DRB and the Contracting Parties, the minutes of meetings and provide administrative services, such as conference facilities and secretarial services. Each Contracting Party shall bear its own costs to copy and distribute written documentation submitted to the DRB and other Contracting Party. Additional copy charges, if any, shall be paid by the requesting Contracting Party. Each Contracting Party shall pay its own attorneys' fees and costs associated with participating in the DRB process.

5.3 If the DRB desires special services, such as legal consultation, accounting, data research and etc., both Contracting Parties must agree and the Contracting Parties will share the costs equally.

~~6.0 THREE PARTY AGREEMENT~~

~~6.1 The DRB members, the Owner and Contractor shall execute the Three Party Agreement as soon as reasonably possible after the members are selected.~~

~~7.0 PUBLIC RECORDS~~

~~7.1 Each DRB member and Contracting Party shall observe and comply with all applicable public records laws (i.e., Chapter 119, Florida Statutes). However, upon the receipt of a public records request, the parties to the Three Party Agreement shall immediately notify the Owner and obtain prior written consent from the Owner before releasing any public record. The Owner shall receive copies of all records provided to the DRB, and shall be the designated custodian of such records for the purposes of complying with the provisions of Chapter 119, and to the extent that the DRB and DRB members are "acting on behalf of" the Owner. Moreover, to the extent that a DRB member is "acting on behalf of" the Owner pursuant to Section 119.0701(1)(a), *Florida Statutes*, the DRB member must comply with Florida's public records laws; specifically, the DRB member must: (1) Keep and maintain public records required by the Owner to perform the service; (2) Upon request from the Owner's custodian of public records, provide the Owner with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, *Florida Statutes*, or as otherwise provided by law; (3) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the contractor does not transfer the records to the Owner; and (4) Upon completion of the contract, transfer, at no cost, to the Owner all public records in possession of the contractor or keep and maintain public records required by the Owner to perform the service. If the contractor transfers all public records to the Owner upon completion of the contract, the contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the contractor keeps and maintains public records upon completion of the contract, the contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the Owner, upon request from the Owner's custodian of public records, in a format that is compatible with the information technology systems of the Owner.~~

~~8.0 LIABILITY OF DRB MEMBERS~~

~~8.1 No DRB member shall be personally liable for any act or omission in the scope of his or her capacity as a DRB member as provided in these Contract Documents, unless such DRB member acted in bad faith or with malicious purpose or in a manner exhibiting wanton or willful disregard of his or her responsibilities.~~

~~END OF SECTION 00 73 83.13~~

~~6.0 THREE PARTY AGREEMENT~~

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~~7.0 PUBLIC RECORDS~~

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~~END OF SECTION 00 73 83.13~~

SECTION 00 73 83.19 – DISPUTE REVIEW BOARD THREE PARTY AGREEMENT

DISPUTE REVIEW BOARD THREE PARTY AGREEMENT

THIS THREE PARTY AGREEMENT, hereinafter called "**Agreement**", made and entered into this _____ day of _____, 20____, between the Greater Orlando Aviation Authority ("**Owner**") and _____ ("**Contractor**") and the Dispute Review Board, ("**Board**"), and consisting of three members: _____, _____, and _____.

WITNESSETH, that

WHEREAS, the Owner is now engaged in the construction of BP , and

WHEREAS, the BP-BP-S00195 contract provides for the establishment and operation of the Board to assist in resolving disputes and claims; and

WHEREAS, the Board is composed of three members, one selected by the Owner, one selected by the Contractor, and the third member selected by these two;

WHEREAS, each member has completed a Disclosure Statement which is attached hereto and made a part of this Agreement;

NOW THEREFORE, in consideration of the terms, conditions, covenants, and performance contained herein, or attached and incorporated and made a part hereof, the parties hereto agree as follows:

I

DESCRIPTION OF WORK

In order to assist in the resolution of disputes and claims between the Contractor and the Owner, the Owner has provided, in the Contract, for the establishment of the Board. The intent of the Board is to fairly and impartially consider disputes placed before it and provide written advisory opinions for resolution of these disputes to both the Owner and the Contractor. The members of the Board shall perform the services necessary to participate in the Board's actions described in Section 00 73 83.13, Dispute Review Board, of the Contract Documents, which is incorporated herein by reference. The members of the Board shall be familiar with the Code of Ethics promulgated by the Dispute Review Board Foundation, and shall perform the services under this Agreement and described in Section 00 73 83.13 in accordance with that Code of Ethics.

II

TIME FOR BEGINNING AND COMPLETION

The Board is to be in operation throughout the life of the active Project until Final Payment.

III

PAYMENT

The Board members shall be paid by the Contractor for services rendered under this Agreement as provided hereinafter. Such payments shall be full compensation for work performed or services rendered, and for all labor, materials, supplies, equipment, and incidentals necessary to the operation of the Board. The Board members shall comply with all applicable portions of 48 CFR 31 (Federal Acquisition Regulations: Contract Cost Principals and Procedures), if applicable to the funding for the Contract.

All Inclusive Fee: Each Board Member will be paid a lump sum fee of $1,200 per day for each day the Board meets for regularly scheduled project meetings. This daily rate includes salary and all expenses related to membership on the Board. In addition, Board members shall be compensated for a maximum of four (4) hours per month at the rate of $200 per hour for time spent reviewing project records outside of meeting days. Subsequent changes in the billing rate must be authorized by a Supplemental Agreement to this Agreement.

An all-inclusive per hearing cost of $8,000 has been established for compensation for all members of the Board for participation in each hearing. The Board chairman will receive $3,000 for participation in the

~~hearing while the two remaining members will receive $2,500 each. If an additional day is required for the hearing, additional compensation will be made for each additional day in the amount defined for a regularly scheduled project meetings. No other preparation costs will be reimbursed for each hearing.~~

~~If a Board member is required to travel more than 50 miles one way to attend a regularly scheduled meeting or a hearing, then each such member shall receive compensation for mileage at the current Standard Mileage Rates published by the Internal Revenue Service. In addition, if a member is required to spend a night associated with each regularly scheduled Board meeting or a hearing, lodging costs shall be reimbursed at the current Per Diem Rates for Orlando, Florida as published by the U.S. Government Services Administration (GSA). If air travel is required, such travel must be arranged by the Owner in accordance with the Owner's travel policy. No other compensation will be made for travel related expenses.~~

~~IV~~
~~NO ASSIGNMENT~~

~~The Board members shall not assign any of the work of this Agreement.~~

~~V~~
~~TERMINATION OF AGREEMENT~~

~~This Agreement may be terminated by mutual agreement of the Owner and the Contractor at any time, upon not less than four weeks written notice to all other parties. Board members may withdraw from the Board by providing four weeks written notice to all other parties. This Agreement will remain in force until another Dispute Review Board Three Party Agreement to replace it has been fully executed. Board members may be terminated for or without cause only by their original appointer; the Owner may only terminate the Owner-appointed member, the Contractor may only terminate the Contractor-appointed member, and the first two members must agree to terminate the third member, except in the instance of an apparent conflict of interest, when a member may be terminated for cause by a vote of both the other two members plus either the Owner or the Contractor.~~

~~VI~~
~~INDEPENDENT CONSULTANT~~

~~The parties hereto mutually understand and agree that each Board member in the performance of duties on the Board is acting in the capacity of an independent consultant and not as an employee or agent of either the Owner or the Contractors. The parties agree that no Board member shall be personally liable for any act or omission in the scope of their capacity as a Board member pursuant to this Agreement unless such Board member acted in bad faith or with malicious purpose or in a manner exhibiting wanton and willful disregard of their responsibilities hereunder.~~

~~VII~~
~~VENUE, APPLICABLE LAW~~

~~In the event that any party deems it necessary to institute legal action or other proceedings to enforce any right or obligation under this Agreement, the parties hereto agree that any such action shall be brought in Orange County, Florida the exclusive venue for such action, and shall be governed by Florida law.~~

~~hearing while the two remaining members will receive $2,500 each. If an additional day is required for the hearing, additional compensation will be made for each additional day in the amount defined for a regularly scheduled project meetings. No other preparation costs will be reimbursed for each hearing.~~

~~If a Board member is required to travel more than 50 miles one way to attend a regularly scheduled meeting or a hearing, then each such member shall receive compensation for mileage at the current Standard Mileage Rates published by the Internal Revenue Service. In addition, if a member is required to spend a night associated with each regularly scheduled Board meeting or a hearing, lodging costs shall be reimbursed at the current Per Diem Rates for Orlando, Florida as published by the U.S. Government Services Administration (GSA). If air travel is required, such travel must be arranged by the Owner in accordance with the Owner's travel policy. No other compensation will be made for travel related expenses.~~

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~~In the event that any party deems it necessary to institute legal action or other proceedings to enforce any right or obligation under this Agreement, the parties hereto agree that any such action shall be brought in Orange County, Florida the exclusive venue for such action, and shall be governed by Florida law.~~

~~VIII~~

~~PUBLIC RECORDS~~

~~Upon receipt of any public records request for documents, papers, letters, or other materials made or received by the parties to this Agreement, the parties hereto shall immediately notify the Owner and obtain prior written consent from the Owner before releasing such records. The Owner shall be afforded an opportunity to assert any privilege or exemption that is available under Florida law concerning the production of such records to third parties prior to production.~~

~~Each Board member and the Contractors shall observe and comply with all applicable public records laws (i.e., Chapter 119, *Florida Statutes*). The Owner shall receive copies of all records provided to the Board, and shall be designated the custodian of the Board and Board members' records for the purposes of complying with the provisions of Chapter 119, and to the extent that the Board and Board members are "acting on behalf of" the Owner.~~

~~Moreover, to the extent that the Board and the Board members are "acting on behalf of" the Owner pursuant to Section 119.0701(1)(a), *Florida Statutes*, the Board and the Board members must comply with Florida's public records laws; specifically, the Board and Board members must: (1) Keep and maintain public records required by the Owner to perform the service; (2) Upon request from the Owner's custodian of public records, provide the Owner with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, *Florida Statutes*, or as otherwise provided by law; (3) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the contractor does not transfer the records to the Owner; and (4) Upon completion of the contract, transfer, at no cost, to the Owner all public records in possession of the Board and the Board members or keep and maintain public records required by the Owner to perform the service. If the Board and Board members transfer all public records to the Owner upon completion of the contract, the Board and Board members shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Board or Board members keep and maintain public records upon completion of the contract, the Board or Board member shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the Owner, upon request from the Owner's custodian of public records, in a format that is compatible with the information technology systems of the Owner.~~

~~IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, THE CONTRACTOR MUST CONTACT THE OWNER'S CUSTODIAN OF PUBLIC RECORDS, WHO CAN BE REACHED AT: www.orlandoairports.net/publicrecords; (407) 825-2400 (PHONE NUMBER); AND "GREATER ORLANDO AVIATION AUTHORITY, PUBLIC RECORDS" ONE JEFF FUQUA BOULEVARD, ORLANDO, FLORIDA 32827.~~

~~For the purposes of seeking information as set out in the above notice, and without any regard to or determination as to whether the Board or Board members are "acting on behalf of" the Owner pursuant to~~

~~Section 119.0701(1)(a), *Florida Statutes*, the Board, the Board members and the Contractors may be consider themselves "contractor[s]."~~

~~IX~~
~~NO BONUS~~

~~The parties hereto agree that they shall not agree to pay or receive any commission, percentage, bonus, or consideration of any nature, other than the payment provided for in Section III above, for their performance and services under this Agreement.~~

~~X~~
~~CONVICTED VENDOR LIST~~

~~The undersigned acknowledges the following notice: "A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a proposal on a contract to provide any goods or services to a public entity, may not submit a proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit proposals on leases or real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount set forth in Florida Statutes, Section 287.017, for CATEGORY TWO, for a period of 36 months from the date of being placed on the convicted vendor list."~~

~~IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.~~

~~Owner's Board Member Contractor's Board Member~~

~~By: _____ By: _____~~

~~Board Selected Member~~

~~By: _____~~

~~Greater Orlando Aviation Authority Contractor~~

~~By: _____ By: _____~~

~~Title: _____ Title: _____~~

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IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

Owner's Board Member — Contractor's Board Member

By: _____ By: _____

Board Selected Member

By: _____

Greater Orlando Aviation Authority — Contractor

By: _____ By: _____

Title: _____ Title: _____

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~~DISCLOSURE STATEMENT~~

~~Pursuant to Section 00 73 83.13, of the BP-S00195, TERM C, PH 1 - AIRSIDE CONCOURSE Contract Documents, each prospective member of the Dispute Review Board shall submit complete disclosure statements for the approval of both the Owner and the Contractor.~~

~~1. Please describe your experience or attach a recent biography or resume of experience. If previously provided, this part may be omitted:~~

_____

_____

_____

_____

~~2. It is vital to the success of the Dispute Review Board that the parties to the Contract have complete confidence in the DRB's impartiality. Therefore, please disclose any past or present relationship with the parties, directly or indirectly, whether financial, professional, social or of any other kind. See attached Disclosure Guide and Section 2.4 of the Dispute Review Board Specifications for assistance. If any relationships arise during the course of the DRB or if there is any change at any time in the biographical information that you have provided, it must also be disclosed. Any doubt should be resolved in favor of disclosure. If you are aware of such relationship, please describe it below.~~

~~o I have nothing to disclose~~

~~o I hereby disclose the following:~~

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_____ _____

~~Owner's DRB Member Dated~~

~~APPROVED:~~

~~Contractor~~ _____ ~~Greater Orlando Aviation Authority~~
_____ ~~(Owner)~~

~~By:~~ _____ ~~By:~~ _____

~~Title:~~ _____ ~~Title:~~ _____

~~DISCLOSURE STATEMENT~~

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o ~~I have nothing to disclose~~

o ~~I hereby disclose the following:~~

_____.

_____ _____
~~Owner's DRB Member~~ ~~Dated~~

~~APPROVED:~~

~~Contractor~~ ~~Greater Orlando Aviation Authority~~
_____ ~~(Owner)~~

~~By:~~ _____ ~~By:~~ _____

~~Title:~~ _____ ~~Title:~~ _____

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_____ _____

~~Contractor's DRB member~~ ~~Dated~~

~~APPROVED:~~

~~Contractor~~ ~~Greater Orlando Aviation Authority~~
~~(Owner)~~

~~By:~~ _____ ~~By:~~ _____

~~Title:~~ _____ ~~Title:~~ _____

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o ~~I have nothing to disclose~~

o ~~I hereby disclose the following:~~

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_____ _____

~~Contractor's DRB member~~ ~~Dated~~

~~APPROVED:~~

~~Contractor~~ ~~Greater Orlando Aviation Authority~~
~~(Owner)~~

~~By:~~ _____ ~~By:~~ _____

~~Title:~~ _____ ~~Title:~~ _____

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~~o I hereby disclose the following:~~

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_____ _____

~~Board Selected Member Dated~~

~~APPROVED:~~

~~Contractor Greater Orlando Aviation Authority~~
~~(Owner)~~

~~By:~~ _____ ~~By:~~ _____

~~Title:~~ _____ ~~Title:~~ _____

DISCLOSURE STATEMENT

Pursuant to Section 00 73 83.13, of the BP-S00195, TERM C, PH 1 - AIRSIDE CONCOURSE Contract Documents, each prospective member of the Dispute Review Board shall submit complete disclosure statements for the approval of both the Owner and the Contractor.

1. Please describe your experience or attach a recent biography or resume of experience. If previously provided, this part may be omitted:

_____

2. It is vital to the success of the Dispute Review Board that the parties to the Contract have complete confidence in the DRB's impartiality. Therefore, please disclose any past or present relationship with the parties, directly or indirectly, whether financial, professional, social or of any other kind. See attached Disclosure Guide and Section 2.4 of the Dispute Review Board Specifications for assistance. If any relationships arise during the course of the DRB or if there is any change at any time in the biographical information that you have provided, it must also be disclosed. Any doubt should be resolved in favor of disclosure. If you are aware of such relationship, please describe it below.

o I have nothing to disclose

o I hereby disclose the following:

_____.

_____ _____
Board Selected Member Dated

APPROVED:

Contractor Greater Orlando Aviation Authority
(Owner)

By: _____ By: _____

Title: _____ Title: _____

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~~DISCLOSURE GUIDE~~

~~The following should be used as a guideline for making disclosures. The term "Project participants" includes the Contractor, Owner, Owner's Authorized Representative (OAR), the Designer (Architect or Engineer), subcontractors, suppliers or the employer of other Dispute Review Board members.~~

1. ~~Have you in the past or do you presently have a direct or indirect ownership or financial interest in any of the Project participants?~~

2. ~~Except for services as a DRB member of the Owner's projects, have you in the past been an employee, contractor or consultant to any of the Project participants within a period of five years prior to the Contract award?~~

3. ~~Have you in the past or do you presently have a personal, professional or business relationship with any of the Project participants?~~

4. ~~Have you had any prior involvement in the Project (other than as a DRB member) of a nature that could be construed to compromise the ability to impartially resolve disputes?~~

5. ~~Have you ever served as a DRB member for other projects in which any of the Project participants were parties?~~

6. ~~Have you ever served as an arbitrator in a proceeding in which any of the Project participants were parties?~~

7. ~~Have you ever served as an expert witness on behalf of any of the Project participants?~~

8. ~~Have any of the Project participants appeared before you in past Dispute Review Board proceedings?~~

9. ~~Have you ever sued or been sued by any of the Project participant.~~

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SPECIAL CONDITIONS REGARDING CONSTRUCTION AT AIRPORT FACILITIES

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SECTION 00 73 93 - SPECIAL CONDITIONS REGARDING CONSTRUCTION AT AIRPORT FACILITIES

ARTICLE 1 AIRPORT LAYOUT PLAN CHANGE REQUEST

1.1 Prior to the start of construction, the Contractor shall be required to review the FAA permit for the construction equipment and machinery planned to be used at the Airport for the Project. If there is any modification required, an amendment shall be filed to the FAA by the Contractor through the OAR. The review and approval process requires a minimum of forty-five (45) days. No construction equipment or machinery shall be permitted on the Airport property without prior approval from the FAA and the Owner. This construction equipment and machinery, with the approval, shall be marked and lighted in accordance with the FAA requirements or as shown and specified in the construction documents.

ARTICLE 2 RESTRICTIONS REGARDING AIR OPERATIONS AREA

2.1 The Contractor shall control its operations and the operations of its Subcontractors and Suppliers so as to provide for the free and unobstructed movement of aircraft in the Air Operations Area ("AOA") of the Airport. When the Work requires the Contractor to conduct its operations within the AOA, the Work shall be coordinated with the Owner's operations department (through the Owner's Authorized Representative-OAR) at least seventy-two (72) hours prior to commencement. The Contractor shall not close an AOA until authorized by the OAR and until the necessary temporary markings and lighting are in place as provided in Paragraph 4, AOA CLOSURES.

ARTICLE 3 CONTRACTOR OPERATIONS ON THE AOA

3.1 Aircraft traffic will continue to use existing runways, aprons, and taxiways of the Airport during the time that Work under the Contract is being performed. The Contractor shall at all times conduct its Work so as to create no hindrance, hazard or obstacle to aircraft using the Airport and must, at all times, conduct the Work in conformance with requirements of the Owner and the FAA Chief Control Tower Operator or authorized representatives.

3.2 The Contractor shall identify each motorized vehicle or piece of construction equipment in conformance to the current edition FAA Advisory Circular 150/5370-2.

3.3 All runways, taxiways, and aprons which have been used by the Contractor's vehicles or equipment shall be returned to the condition existing prior to any closing or crossing and prior to the reopening of these areas to aircraft traffic. All existing wooded or grassed areas beyond the limit of Work damaged by the Contractor's operations shall be restored to its original condition by the Contractor.

3.4 If the Contractor is given approval to work at night, the Contractor shall provide lights at the work site and along the access route. Type, direction, number and location of lights shall be subject to the approval of the Owner and FAA Chief Control Tower Operator.

3.5 Open flame type lighting is prohibited on the AOA.

3.6 The Contractor is to develop and provide the Safety Plan Compliance Document (SPCD) for the project in conformance with the current edition of FAA Advisory Circular 150/5370-2G Operational Safety at Airports During Construction.

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ARTICLE 4 AOA CLOSURES

4.1 If absolutely essential, in order to permit construction, runways or taxiways may be closed to aircraft operations during periods when weather or other conditions do not require its use by aircraft, upon advance written application by the Contractor to the Owner or its OAR on a form to be provided by the Owner. The Contractor will schedule and organize its Work so that a minimum of closings or crossing of runways and taxiways will be required during the performance of the Work.

4.2 When the Work requires closing an AOA of the Airport or portion of such area, the Contractor shall furnish, erect and maintain temporary markings and associated lighting conforming to the requirements of the current edition FAA Advisory Circular 150/5340-1, Marking of Paved Areas on Airports.

ARTICLE 5 NAVAIDS AND OTHER SIGNALS

5.1 There are installed on the Airport FAA NAVAIDs or Owner NAVAIDs and other electronic and visual signals (hereinafter collectively NAVAIDS) which may include but not be limited to, ASR, UHF, NDB and VHF Receivers and Transmitters, National Weather Service Facilities, lighting, electric cables and controls relating to such NAVAIDs and facilities and other electric power cables serving other facilities. Such NAVAIDs, National Weather Service and other facilities and electric cables must be fully protected during the entire construction time. Work under this Contract can be accomplished in the vicinity of these facilities and cables only at approved periods of time, which approval is subject to withdrawal at any time because of changes in the weather, emergency conditions on the existing airfield areas, anticipation of emergency condition and for any other reason as determined by the OAR acting under the orders and instructions of the Owner or the designated FAA representative. Any instructions to the Contractor to clear any given area, at any time by the OAR, the Airport Director of Operations or the Air Traffic Control Tower (by radio or other means) shall be immediately executed. Construction work will be commenced in the cleared area only when additional instructions to this effect are issued. To the extent that they are known, the approximate locations of NAVAIDs, National Weather Service and other facilities have been indicated on the Contract Drawings. The Owner does not warrant or guaranty the accuracy or completeness of the location information relating to NAVAIDs, National Weather Service and other facilities appearing on the Contract Drawings. Any inaccuracy or omission shall not relieve the Contractor of its responsibility to protect such existing facilities from damage or unscheduled interruption of service.

5.2 Power and control cables leading to and from any NAVAIDs, National Weather Service and other facilities will be marked in the field by the Contractor, before any work in its general vicinity is started. Thereafter, through the entire time of this construction, they shall be protected from any possible damage.

5.3 These special provisions intend to make perfectly clear the need for protection of FAA NAVAID's, National Weather Service and other facilities and cables by this Contractor at all times.

5.4 The Contractor shall immediately repair at its expense, with identical material by skilled workers, any underground cables serving FAA NAVAIDs, National Weather Service and other Airport facilities, which are damaged by its workers, equipment or work. Prior approval of the FAA must be obtained for the materials, workers, time of day or night, method of repairs, or for any temporary or permanent repairs the Contractor proposes to make to any FAA NAVAIDs, National Weather Service facilities or other cables and controls serving such NAVAIDs and facilities which are damaged by the Contractor. Prior approval by the Owner must be obtained for the materials,

workers, time of day or night, method of repairs for any temporary or permanent repairs the Contractor proposes to make to any of the airport facilities and cables damaged by the Contractor.

ARTICLE 6 FAA REQUIRED PROVISIONS

6.1 Agreements with the United States and State of Florida.

6.1.1 This Contract shall be subject to all restrictions of record affecting the Airport and the use thereof, all Federal and Florida laws and regulations affecting the same, and shall be subject and subordinate to the provisions of any existing agreement between the Owner and the United States of America or the State of Florida, their boards, members, agencies or commissions and to future agreements between the foregoing relative to the operation or maintenance of the Airport, the execution of which may be required as a condition precedent to the expenditure of Federal or state funds for the development of the Airport, or as a condition precedent to the use of the Airport, or any part thereof, by the Contractor, the Owner or otherwise. All provisions hereof shall be subordinate to the right of the United States of America to terminate the right of the Contractor, the Owner, or others, to occupy or to use the Airport, or any part thereof, during the time of war or national emergency.

6.2 Fair Prices.

6.2.1 If the Contractor shall furnish any services to the public at the Airport, it shall furnish said services on a fair, equal and non-discriminatory basis to all users thereof and shall charge fair, reasonable and non-discriminatory prices for each unit of service, provided that the Contractor shall be allowed to make reasonable and non-discriminatory discounts or rebates or other similar types of price reductions to volume purchasers, if any.

6.3 Non-Discrimination

6.3.1 During the performance of this Contract, the Contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

1. Compliance with Regulations. The Contractor shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter, "DOT"), Title VI List of Pertinent Nondiscrimination Acts and Authorities, and 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, which are identified herein, incorporated by reference, and made a part of this Contract.
2. Nondiscrimination. The Contractor, with regard to the work performed by it during the Contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of Subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities and Regulations, including employment practices when the Contract covers any activity, project, or program set forth in Appendix B of49 CFR Part 21. The Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance. This provision binds the Contractor and subcontractors of all tiers from the bid solicitation period through the completion of the Contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.
3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment. In all solicitations, either by competitive bidding or negotiation, made by the Contractor for work to be

workers, time of day or night, method of repairs for any temporary or permanent repairs the Contractor proposes to make to any of the airport facilities and cables damaged by the Contractor.

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3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment. In all solicitations, either by competitive bidding or negotiation, made by the Contractor for work to be

performed under a subcontract, including procurements of materials or leases of equipment, each potential Subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this Contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.

4. Information and Reports. The Contractor shall provide all information and reports required by the Nondiscrimination Acts and Authorities, the Regulations, and directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Owner or the Federal Aviation Administration (FAA) to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities, Regulations, orders, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the Owner or the FAA, as appropriate, and shall set forth what efforts it has made to obtain the information.
5. Sanctions for Noncompliance. In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the Owner shall impose such contract sanctions as it or the FAA may determine to be appropriate, including, but not limited to:

   a. Withholding of payments to the Contractor under the Contract until the Contractor complies, and/or
   b. Cancellation, termination, or suspension of the Contract, in whole or in part.

6. Incorporation of Provisions. The Contractor shall include the provisions of paragraphs 6.3.1 through 6.3.6 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Nondiscrimination Acts and Authorities, the Regulations, or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as the Owner or the FAA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or supplier as a result of such direction, the Contractor may request the Owner to enter into such litigation to protect the interests of the Owner and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

   Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the Owner deems appropriate.

6.3.2 Title VI List of Pertinent Nondiscrimination Acts and Authorities.

1. During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter in this section referred to as the "contractor") agrees to comply with the following nondiscrimination statutes and authorities; including but not limited to:

   a. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
   b. 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);
   c. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
   d. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;

e. The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
f. Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
g. The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, subrecipients and contractors, whether such programs or activities are Federally funded or not);
h. Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;
i. The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
j. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
k. Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
l. Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

6.4 Miscellaneous Provisions:

1. The Contractor will not erect or permit the erection on the Airport property of any permanent or temporary structure or facility which would interfere materially with the use, operation or future development of the Airport, or permit the generation of electronic emissions that would interfere with communications and navigation by aircraft using the Airport.
2. This Contract confers no right upon the Contractor to use any landing area or air navigation facility at the Airport, and hence, nothing contained in this Contract shall be construed to grant, or to authorize the granting of, an exclusive right for the use of any such landing area or air navigation facility in violation of Section 308 of the Federal Aviation Act of 1958.
3. The Contractor shall comply with all applicable Transportation Security Administration (TSA) regulations concerning Airport security, including but not limited to 49 CFR 1542 and the Airport Security Plan (ASP)..
4. The Contractor shall not, in its operations hereunder, generate any odors, fumes, smoke, noise, glare, vibration, electronic emissions, soot, dust or atmospheric pollution, sewage, industrial or other wastes, in violation of any applicable law, regulation or procedure of any Federal, state, county or city authority having jurisdiction with respect to such matters.
5. The Owner reserves unto itself, its successors and assigns, for the use and benefit of the public, a right of flight for the passage of aircraft in the airspace above the surface of the Airport, together with the right to cause in said airspace such noise as may be inherent in the operation of aircraft, now known or hereafter used, for navigation or flight in the said airspace, and for use of said airspace for landing on, taking off from or operating on the Airport.

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5. The Owner reserves unto itself, its successors and assigns, for the use and benefit of the public, a right of flight for the passage of aircraft in the airspace above the surface of the Airport, together with the right to cause in said airspace such noise as may be inherent in the operation of aircraft, now known or hereafter used, for navigation or flight in the said airspace, and for use of said airspace for landing on, taking off from or operating on the Airport.

6. The Contractor expressly agrees for itself, its successors and assigns, to restrict the height of structures, objects of natural growth and other obstructions on the Airport to such a height so as to comply with Federal Aviation Regulations, Part 77.
7. The Contractor agrees for itself and its Subcontractors to require any lights on the Airport to be constructed, focused or arranged in a manner that will prevent the lights from casting beams in an upward direction so as to interfere with the vision of pilots in aircraft.
8. If the FAA determines that any right or claim of right in or to the property herein creates an undue risk or interference with the operation of the Airport or the performance of or compliance with any covenants and conditions to which the use of the Airport is subject, said right or claim shall be extinguished or modified in a manner acceptable to the FAA.

ARTICLE 7 USE OF SITE

7.1 Personal vehicles of employees and vehicles operated by vendors of goods or services will not be permitted beyond the Contractor's parking area.

7.2 No signs shall be placed on the site, nor shall any photographs be taken without the OAR's prior written consent. No visitors other than persons engaged in the Work shall be permitted on the construction site without the OAR's prior written consent.

ARTICLE 8 BARRICADES, WARNING SIGNS AND HAZARD MARKINGS

8.1 For work on the AOA, the following requirements are in addition to those prescribed in Section 01500, Construction Facilities and Temporary Controls.

8.2 The Contractor shall furnish, erect and maintain markings and associated lighting of open trenches, excavations, temporary stock piles and parked construction equipment that may be hazardous to the operation of emergency fire-rescue or maintenance vehicles on the Airport in reasonable conformance to the current edition FAA Advisory Circular 150/5370-2, Safety on Airports During Construction Activity.

8.3 The Contractor shall furnish and erect all barricades, warning signs, and marking for hazards prior to commencing work which requires such erection and shall maintain the barricades, warning signs, and markings for hazards until their dismantling is approved in writing by the OAR.

8.4 The Contractor shall identify each motorized vehicle or piece of construction equipment in reasonable conformance to the most current version of AC 150/5370-2 and AC 150/5210-5.

8.5 All cranes used on the site shall be marked in the following manner:

1. During daylight hours, a flag shall be installed at the highest point of the equipment. The flag shall be aviation surface orange and be a minimum of five (5) feet square.
2. During non-daylight hours, at least one steady burning light should be installed at the highest point of equipment on a horizontal plane in a manner to insure unobstructed visibility of aircraft at any normal angle of approach.

ARTICLE 9 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS

9.1 For work on the AOA, the following requirements are in addition to those prescribed in Section 01500, Construction Facilities and Temporary Controls.

9.2 To the extent that such public or private utility services, FAA or National Oceanic and Atmospheric Administration (NOAA) facilities, or utility services of other governmental agency are known by the Owner to exist within the limits of the Contract Work, the approximate locations have been indicated on the Contract Drawings.

9.3 The Contractor shall cooperate with the owner of any public or private utility service, FAA or NOAA, or a utility service of another governmental agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the Work. In addition, the Contractor shall control its operations to prevent the unscheduled interruption of such utility services and facilities.

ARTICLE 10 ARCHAEOLOGICAL AND HISTORICAL FINDINGS

10.1 Unless otherwise specified in the Contract Documents, the Contractor is advised that the site of the work is not within any property, district or site, and does not contain any building, structure or object listed in the current National Register of Historic Places published by the United States Department of the Interior.

10.2 Should the Contractor encounter, during its operations, any building, part of a building, structure, or object which is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the OAR. The OAR will investigate the Contractor's finding and will direct the Contractor to either resume or suspend operations.

ARTICLE 11 INSPECTION BY OTHERS

11.1 Pursuant to a Public Transportation Grant Agreement between the State of Florida Department of Transportation and the Owner, the State of Florida may pay a portion of the costs of this improvement. The construction work and labor shall be done in accordance with the laws affecting and regulations of the State of Florida Department of Transportation. The construction work and materials, therefore, will be subject to inspection by the State of Florida Department of Transportation or its agents as it or they may deem necessary; provided, however, that such inspections shall not be construed so as to make the State of Florida Department of Transportation a party to this Contract and shall not interfere with the performance of the obligations of any party to this Contract.

END OF SECTION 00 73 93

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SECTION 00 73 93.01 - SECURITY AND BADGING AT AIRPORTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. The Contractor and their subcontractors shall comply with all security requirements specified herein.

1.2 DEFINITIONS

B. AOA – Aircraft Operating Area

C. Airport Identification Media – identification badge issued by the Owner

D. Photo ID Badges (security) – photo identification badge issued by the Owner for Secured, Sterile and/or AOA areas

E. Photo ID Badges (white) – photo identification badge issued by the Owner for non-security areas only

F. Non-photo ID Badges (construction) – identification badge issued by the Owner for escorted access to Secured, Sterile and AOA areas

G. Non-photo ID Badges (white) – identification badge issued by the Owner for escorted access to non-security areas only

H. Automobile Decal – Owner issued emblem displayed on vehicle

1.3 CONTRACTOR PERSONNEL SECURITY ORIENTATION

A. Prior to working in the construction area, the Contractor shall inform all Contractor personnel of these requirements and, from time to time, other security provisions adopted by the Owner. All new employees shall also be briefed on these requirements prior to working in the construction area. All authorized unescorted employees requiring access will receive security training prior to being issued identification media. All authorized signatories for each company requesting access will receive specialized training from the Access Control Office regarding processes, access and required documentation as well as fees.

1.4 ACCESS TO SITE

A. Contractors access the site as shown on the plans or as directed by the OAR. The Contractor shall not permit any unauthorized construction personnel or traffic on the site. The Contractor shall be responsible for traffic control to and from the various construction areas on the site. The Contractor is responsible for immediate cleanup of any debris deposited along any access road as a result of his/her construction traffic. Directional signage at the access gate and along the delivery route to

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the storage area or work site shall be as directed by the OAR. Should a construction gate access the AOA, the Contractor shall coordinate with the Owner's Security through the Owner/OAR to request access point and schedule the Owner's security staff.

1.5 MATERIAL DELIVERY TO THE SITE

A. All Contractor's material orders for delivery to the site shall use as a delivery address the access point at the Contractor's storage site at the airport to avoid delivery trucks from entering into the airport or taking short cuts through the perimeter gate and entering into aircraft operations areas inadvertently. Deliveries to the terminal facility or the AOA shall be arranged with the OAR prior to delivery to ensure no operational interruptions and the Owner will make arrangements for placement on the vendor list.

1.6 CONSTRUCTION AREA LIMITS

A. The location of construction material storage areas, equipment storage areas, parking areas and other areas required for the Project will be requested by the Contractor and approval will be coordinated by the OAR. The Contractor shall erect and maintain suitable fencing, marking and/or warning devices suitable for both day/night use to delineate the perimeter of all such areas.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION

3.1 AIRPORT IDENTIFICATION MEDIA, AUTOMOBILE DECALS AND KEY REQUEST APPLICATIONS

A. Authorization to apply for any Airport Identification Media (badges), Automobile Decals and Key Requests will be in the form of an Introduction Letter signed by GOAA. Introduction letters will be provided for the Contractor and its subcontractors.

B. The Contractor and each Subcontractor shall designate representatives, in writing on company letterhead (format to be provide by the Access Control Office), to be the authorized signatories for badge, decal and key requests. All authorized signatories must receive required training, even if they are not applying for an ID.

C. All personnel applying for a pictured ID badge must attend an Airport Security Training Program class and, if applicable, a Vehicle Operating Class and/or Movement Area Training Class. The Computer Based Training Classes are provided on a walk in basis. The training office hours in Access Control Office are Monday through Friday from 0730 – 1400 hours.

D. Any outstanding fees for badges, decals or keys will be deducted from Contractor's final payment.

3.2 BADGE APPLICATION PROCESS

A. All new applicants requiring unescorted access to a Secured or Sterile area of the airport must undergo a Criminal History Records Check (CHRC), a Security Threat Assessment (STA), and are subject to the requirements of Title 49 of the Code for Federal Regulations Part 1542 or 1544 and the Airport Security Improvement Act of 2000. The CHRC and STA typically take less than 7-10 calendar days but may take longer depending on applicant's history. If granted access, a pictured ID badge will be issued in a color representative of the work area.

B. If an applicant has a Criminal History Record, their application must be reviewed by the Airport Security Coordinator. The applicant may be required to submit additional documentation. If an individual has ever pleaded guilty or nolo-contendere (no contest) to, had an adjudication withheld, been convicted or found not guilty by reason of insanity to any of the crimes listed in Title 49 of the Code of Federal Regulations, they may be prohibited access.

C. Non-photo ID badges do not require a CHRC or fingerprinting.

D. Badges will be issued for the duration of the project but no badges will be issued for longer than two years. In the event the project exceeds two years, an additional introduction letter requesting an extension will need to be submitted to the Access Control Department. Contractor personnel with movement area designations on their badge will be issued a badge with duration of one year from the date of the movement area training class. In the event a badge expires prior to renewal, Applicant will need to follow all new applicant procedures which include attendance of classes and fingerprinting. All outstanding and/or expired or non-returned badges and/or keys must be resolved, by paying fees or physically returning the badges(s) and/or key(s), before renewals, extensions or new badges and/or keys will be authorized.

3.3 FEES ASSOCIATED WITH ACCESS CONTROL MEDIA

A. Identification Badges – new, renewal, additional insignia, insignia, or name change $25.00

B. Non-returned Badges - (fee charged to employer) $100.00

C. Lost identification badge – Replacement $50.00

D. Stolen Identification badge - No charge with proper documentation $00.00

E. Fingerprints $27.00

F. Security Background Check $11.00

G. Keys $10.00

H. Lost key replacement $50.00

I. Non-returned keys - (fee charged to employer) $50.00

J. AOA Vehicle Decals $25.00

K. Fees can be paid by company check or cash at time of processing. The Owner will not reimburse Contractor for any fees or costs associated with the security requirements.

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J.	AOA Vehicle Decals	$25.00

K. Fees can be paid by company check or cash at time of processing. The Owner will not reimburse Contractor for any fees or costs associated with the security requirements.

3.4 AUTOMOBILE DECAL REQUIREMENTS

A. Applications for vehicle access to the AOA shall be obtained from the Owner's Construction Department. Applicant and vehicle must be covered by the company's general and automobile liability insurance policies of not less than Five Million Dollars ($5,000,000) for each policy and proof of insurance must be submitted, along with a copy of the vehicle registration, with the AOA Decal Form. A $25.00 payment, per vehicle, must be submitted at this appointment.

B. Automobile decals will expire on the expiration date of either the project or the insurance, whichever is sooner.

C. All vehicles must have AOA decals on the front and rear windows and have appropriate company logos on the right and left side of the vehicles. Logos shall be of a size to be seen from 100 feet and may be magnetic. Unless escorted, all drivers of vehicles on the AOA must attend a "Vehicle Operations" class and have the appropriate symbol added to the ID badge. Only employees with photo ID badges, permitted for driving, are allowed to drive on the AOA or to escort other vehicles.

D. In the event a vehicle needs terminal access only, access to the terminal must be approved and company added to the authorized vendor list. A parking location must be obtained to park under the terminal.

3.5 VEHICLE REQUIREMENTS ENTERING AND DRIVING ON THE AOA TO ACCESS TERMINAL/AIRSIDES

A. All unescorted vehicles must display valid AOA vehicle decals and appropriate company signage on exterior of vehicle.

B. All vehicles will be searched before entering the AOA.

C. Vehicles can be left unattended/parked in designated areas while on the AOA, including being parked in the baggage makeup areas, if authorized by OAR to be parked for project purposes.

D. Vehicles left unattended shall remain unlocked with keys available.

E. Coordinate with the Owner's Operations about parking in and around aircraft at Airsides, particularly international aircraft.

F. Coordinate with the Owner's Operations regarding parking in the baggage makeup areas – vehicles will be towed if parked in non-designated areas.

3.6 VEHICLE REQUIREMENTS ENTERING AND DRIVING UNDER TERMINAL BUILDING

A. All vehicles must display appropriate company signage on exterior of vehicle.

B. All vehicles will be searched before entering terminal first level parking and loading dock areas.

C. Vehicles can be left unattended while parked in the terminal first level parking and loading dock areas if permission from OAR is received.

D. Vehicles must always be locked when left 'unattended'.

3.7 VEHICLE REQUIREMENTS NEAR TERMINAL AND TERMINAL TOP PARKING AREA

A. OAR must coordinate authorization for access and parking near the Terminal, including Curbs, and Terminal Top parking area. Authorization will be project specific.

B. All vehicles will be attended by contractor personnel at all times when located/parked at all commercial lanes, ticketing and baggage ramps, loading/off-loading operations.

C. All contractor vehicles parked at the terminal building, commercial lanes, ticketing and baggage ramps, loading/off-loading operations must have the contractors name and logo on both sides of the vehicle.

D. All contractor vehicles are subject to search when located near the terminal building.

3.8 CONSTRUCTION SITES/LAYDOWN AREAS

A. Demising areas will be locked at all times with Owner's lock, unless attended by contractor personnel. Lock is available from Owner's lock shop.

B. Stored materials located within the terminal/airsides area will be enclosed with demising wall/fencing and will be subject to searches.

C. Dumpsters located within 300 feet of the terminal will be located inside a demised/fenced enclosure and will not be required to have a photo ID badged monitor.

D. Dumpsters located in a public area (outside of a demised/fenced enclosure) will be required to have a photo ID badged monitor.

E. Dumpsters will be emptied by the end of every business day.

F. There shall also be a means to remove the dumpster within reasonable time due to an emergency or security issues.

G. All prohibited items in the Sterile Area must be secured or controlled at all times.

3.9 SECURITY VIOLATIONS

A. The Owner will enforce all security procedures. Any violators will have their Access removed for a minimum period of seven calendar days.

B. An individual who has had access privileges removed may not be escorted into any security are during that time. Remedial security training must also be taken for security violations.

DURING PERIODS OF HEIGHTENED HOMELAND SECURITY ALERT LEVELS, ADDITIONAL SECURITY MEASURES WILL BE IMPOSED.

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END OF SECTION 00 73 93.01

SECTION 00 73 93.02 - FIS/CBP ACCESS PROCEDURES AT OIA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions/Provisions of Contract, including Contractual Conditions and other Division 01 Specification Sections, apply to this Section.

B. Security and Badging at Airports 00 73 93. 01

C. Special Conditions Regarding Construction at Airport Facilities 00 73 93

1.2 DESCRIPTION

A. General: The U.S. Customs Border Protection (CBP) spaces, including the Federal Inspection Station (FIS) at Orlando International Airport, require CBP approval to access, regardless of the time of day. All persons entering the FIS must be vetted and approved by U.S. Customs and Border Protection before obtaining either a Temporary badge or a Hologram designation on their ID Badge. GOAA Contractors, Consultants and Owner's Authorized Representatives (OARs) are allowed to apply for a Hologram designation on GOAA Security Photo ID badges. Contractors and their sub-contractors with personnel using GOAA Escort required ID Badges must ensure the personnel granted entry into FIS, regardless of the time of day, have been vetted by CBP.

1.3 DEFENITIONS:

A. FIS Interior: All interior areas controlled by USCBP. Contractors are not allowed in the FIS while an International aircraft is processing.

B. FIS Exterior: The exterior area inside the perimeter road. No exterior work is to occur while an International aircraft is processing; see attached exhibits for Airside 1 and Airside 4.

1.4 REQUIREMENTS:

A. The General Contractor and Major subs including: Mechanical, Electrical, Site and Exterior shell must have the continuous bond. Holograms are required for any work conducted independently at the interior or exterior. Any work outside of the demised areas requires a hologram.

B. Coordinate all schedules with the OAR. At any time, the Owner reserves the right to require holograms.

C. GOAA OAR CBP Liaison: Contractors must have GOAA approval prior to contacting CBP for any

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B. Coordinate all schedules with the OAR. At any time, the Owner reserves the right to require holograms.

C. GOAA OAR CBP Liaison: Contractors must have GOAA approval prior to contacting CBP for any

temporary badges or holograms. The GOAA OAR CBP Liaison will assess the projects and facilitate the process.

D. Duration of Access: For Contractors, the duration for access will be tied to the Construction Project schedule.

E. Contractors and OARs: Contractors and OARs must establish a Person as a "CBP Coordinator". The Coordinator is the point of contact for that company and is responsible for submitting applications to CBP among other things. The Coordinator must take a special training class given by CBP. The training must be scheduled at the USCBP office at Landside across from the Lost and Found. All documents must flow through the Coordinator to CBP. CBP will contact the Coordinator if there are any issues with the vetting process for any persons in that company. Individuals other than the Coordinator should not come to the CBP Landside office unless requested by CBP. Access to the FIS is for project business only. Access to the FIS is not allowed for breaks or meeting and greeting of passengers.

F. Bonding: All companies requesting access to CBP security areas are required to post a bond, which must be posted before entry is granted. The following list is provided as an example; Final coordination required with CBP. The bonding process is as follows:

1. Post a continuous CF 301 Bond (Type 1 or 2) or an Airport Security Bond. The bond is obtained from an authorized surety company as referenced in 19CFR113.37. The face value of the bond depends upon how many employees will require access to the Customs security areas.

   a) Less than 15 - $25,000.00
   b) Between 15 and 25 - $50,000.00
   c) More than 25 - $100,000.00

2. The CF 301 Bond can be designated as an import/broker bond, warehouse bond, international carrier bond, or a non-specific Airport Security Bond.
3. The Revenue Division will be responsible for resolving any problems/issues on the Type 1 bonds with the bond filer. Additional information may be located at http://cbp.gov/xp/cgov/import/communications to industry/pilot program.
4. Premiums on the continuous bond are paid yearly to their respective insurance agents.
5. The bond must be registered with U.S. Customs and Border Protection Bond Desk, 9043 Tradeport Drive, Orlando, Florida 32827.
6. A copy of the continuous CF 301 bond or an original Airport Security Bond must be filed in the CBP Security Office.
7. Employers must immediately notify the CBP Security Office in writing of any change in the status of the company bond (lapsed, terminated, company name or address change, reduced bond amount etc.). All pertinent bond information must be the same as the company (company name, address, IRS number).
8. An insufficient bond amount may result in a requirement to increase bond coverage and may result in revocation of CBP access for employees covered under the insufficient bond.
9. Violations of CBP Airport Security rules and regulations will subject an employer to liquidated

damages of $1000.00 per violation.

G. Temporary Badges: Information to be submitted for vetting for Temporary badge for day access only (up to 60 days) includes:

1. All persons must be vetted.
2. Temporary badge access forms required by CBP
3. Name, Date of Birth, Social Security Number, copy of Photo ID such as a Driver's License with current address
4. Note that if workers need access after their temporary badge expires, then they must go through the vetting process again.
5. Note: for temporary badges less than 30 days, a continuous bond is not required.
6. Note: for temporary badges more than 30 days, a continuous bond is required; the temporary badge for the same contractor may be extended for 30 days, if the Contractor has a continuous bond in place.

H. Temporary badges for single day access:

1. Temporary day badges can be obtained at either AS1 or AS4;
2. All persons must be vetted. Once accepted, the badge holder must leave a driver's license or other picture ID with CBP.
3. At the end of the day, the badge holder must return the Temporary day badge and at that time, the picture ID will be returned.
4. Temporary badge holders must be escorted by a badge holder with a hologram seal.

I. Hologram Designation: Documents to be submitted for vetting and obtaining a Hologram designation include:

1. CBP Form 3078, two-page -must be neat and readable.
2. Cover memo to U.S. Customs and Border Protection indicating what type of work is to be performed, areas of access and time frame for the work.
3. Driver's License (copy)
4. Social Security Card (copy)
5. Birth Certificate or Passport or Certificate of Naturalization (copy)

   a) Puerto Rico recently issued a new Birth Certificate – you must include the new one
   b) If non US Citizen, provide Work Authorization Document

6. Other CBP forms as required

J. Vetting Process: During the vetting process, CBP may require interviews. If a person does not pass the vetting process, they are not allowed in the FIS. The vetting process will take up to 2 weeks. In scheduling work in the FIS, by either the general or subcontractors, include the GOAA Badging and CBP vetting process in construction work schedules.

K. Escorting: OARs and Contractors may escort others only if they have a hologram designation on their badge. If Construction related personnel are going to be accessing the FIS for extended

damages of $1000.00 per violation.

G. Temporary Badges: Information to be submitted for vetting for Temporary badge for day access only (up to 60 days) includes:

1. All persons must be vetted.
2. Temporary badge access forms required by CBP
3. Name, Date of Birth, Social Security Number, copy of Photo ID such as a Driver's License with current address
4. Note that if workers need access after their temporary badge expires, then they must go through the vetting process again.
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H. Temporary badges for single day access:

1. Temporary day badges can be obtained at either AS1 or AS4;
2. All persons must be vetted. Once accepted, the badge holder must leave a driver's license or other picture ID with CBP.
3. At the end of the day, the badge holder must return the Temporary day badge and at that time, the picture ID will be returned.
4. Temporary badge holders must be escorted by a badge holder with a hologram seal.

I. Hologram Designation: Documents to be submitted for vetting and obtaining a Hologram designation include:

1. CBP Form 3078, two-page -must be neat and readable.
2. Cover memo to U.S. Customs and Border Protection indicating what type of work is to be performed, areas of access and time frame for the work.
3. Driver's License (copy)
4. Social Security Card (copy)
5. Birth Certificate or Passport or Certificate of Naturalization (copy)

    a) Puerto Rico recently issued a new Birth Certificate – you must include the new one
    b) If non US Citizen, provide Work Authorization Document

6. Other CBP forms as required

J. Vetting Process: During the vetting process, CBP may require interviews. If a person does not pass the vetting process, they are not allowed in the FIS. The vetting process will take up to 2 weeks. In scheduling work in the FIS, by either the general or subcontractors, include the GOAA Badging and CBP vetting process in construction work schedules.

K. Escorting: OARs and Contractors may escort others only if they have a hologram designation on their badge. If Construction related personnel are going to be accessing the FIS for extended

periods of time, then holograms need to be obtained.

L. Issuance of Hologram on Security Badge: GOAA Badging will notify and issue the hologram designation on the badge at the GOAA Badging office on Cargo Road, following the submission of the applications and vetting by the CBP.

M. Access to USCBP spaces including the FIS must be coordinated through the OAR:

1. All Contractor access must be coordinated through the OAR. The OAR will coordinate with GOAA OPs and CBP. For FIS spaces, Contractors with a hologram designation can be in the FIS at night without a CBP Officer. Prior to entering the FIS during these hours, OAR's and/or Contractors are to call the Airport Operations Center (AOC) at 407-825-3840, informing them that a badged person with a hologram is entering the FIS and escorting vetted personnel with GOAA escort required badges. The OAR Night Inspector will be present for any night work in the FIS area.

2. Night access to FIS: Hours of work (as of August 18, 2015 are approximately 8 pm to 4 am for AS4 only). OARs and Contractors must check flight schedules prior to entering the FIS area. OARs and Contractors are not allowed in the FIS when passengers are processing. If there are any questions about flights, please call GOAA Ops (AOC) at 407-825-3840. The OAR must submit names of Contractor and OAR personnel who will enter the FIS prior to 4:00 p.m. the day of night access. The OAR must send this request to CBP and to the AOC. Only vetted persons will be allowed access to the FIS. If the staffing is known for an entire week, then that list can be submitted. However, any changes to the staffing plan submitted, must be updated and submitted.

3. Day access to the FIS: Day access must be coordinated in advance with CBP by the GOAA OAR CBP Liaison. OARs and Contractors must check flight schedules prior to entering the FIS area. OARs and Contractors are not allowed in the FIS when passengers are processing. If there are any questions about flights, please call GOAA Ops (AOC) at 407-825-3840.

4. Access to CBP office areas: The GOAA OAR CBP Liaison will coordinate any special access to CBP office areas.

5. Daytime Check in required at FIS: for AS4 please check in at room 1770 to let the CBP personnel know of the visit. For AS1 please check in at room 1563 to let the CBP personnel know of the visit.

6. Emergency Access: Emergency access is allowed. However, Contractors and Consultants must check in at AS4 at room 1770 and AS1 at room 1563.

7. City of Orlando Inspections: City Inspections can occur during the day and at night when there are no passengers. Inspections should be coordinated through the OAR. City of Orlando Inspectors must be vetted and can be escorted by badge holders with a hologram seal.

N. Protection of space and end of work shift clean up: All spaces must be returned to existing

conditions as found at the beginning of the shift. Spaces and equipment must be covered during the work shift especially while conducting overhead ceiling work. All spaces must be dusted and vacuumed at the end of the shift. All construction debris must be completely removed from the FIS. Contractor equipment and tools must also be removed from the FIS. To the extent possible, ceiling and wall penetration areas must be completely closed up at the end of each shift.

1.5 DOCUMENT HISTORY:

A. CBP Approved on March 29, 2012

B. CBP Update Approved on 8.21.15

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

PART 4 - EXHIBITS Airside 3 and 4

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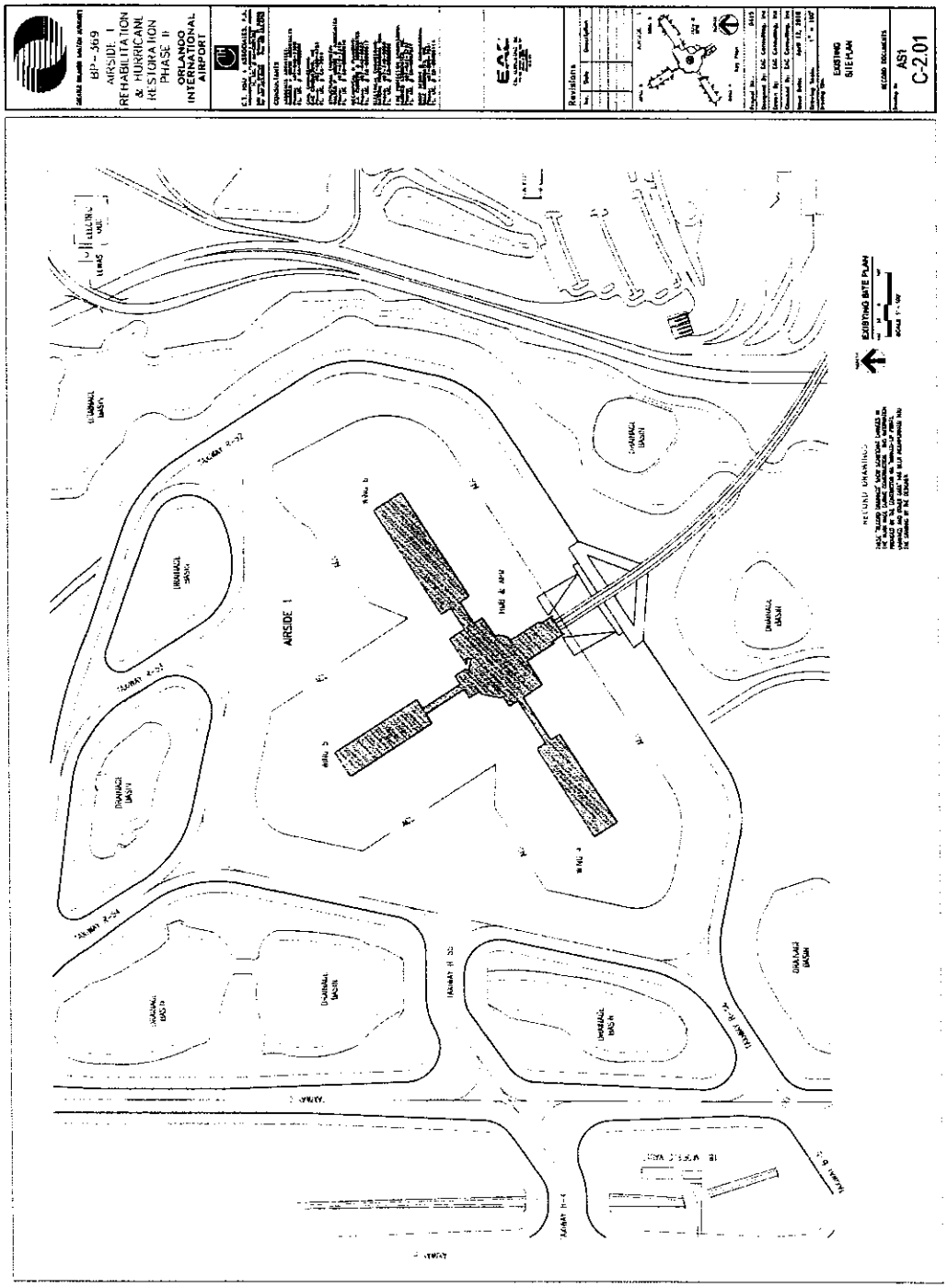
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AIRSIDE 1
REHABILITATION
& HURRICANE
RESTORATION
PHASE II
ORLANDO
INTERNATIONAL
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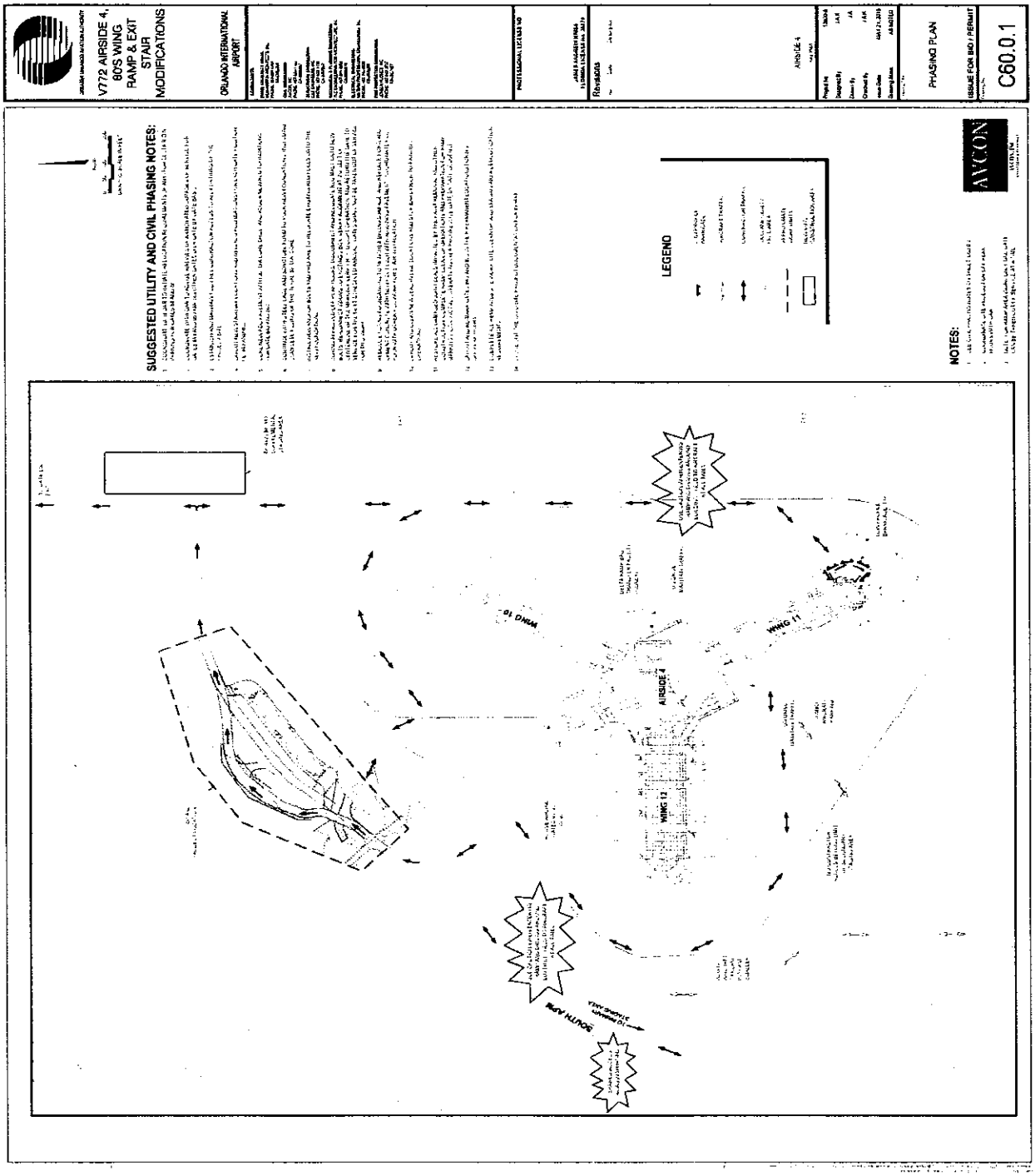
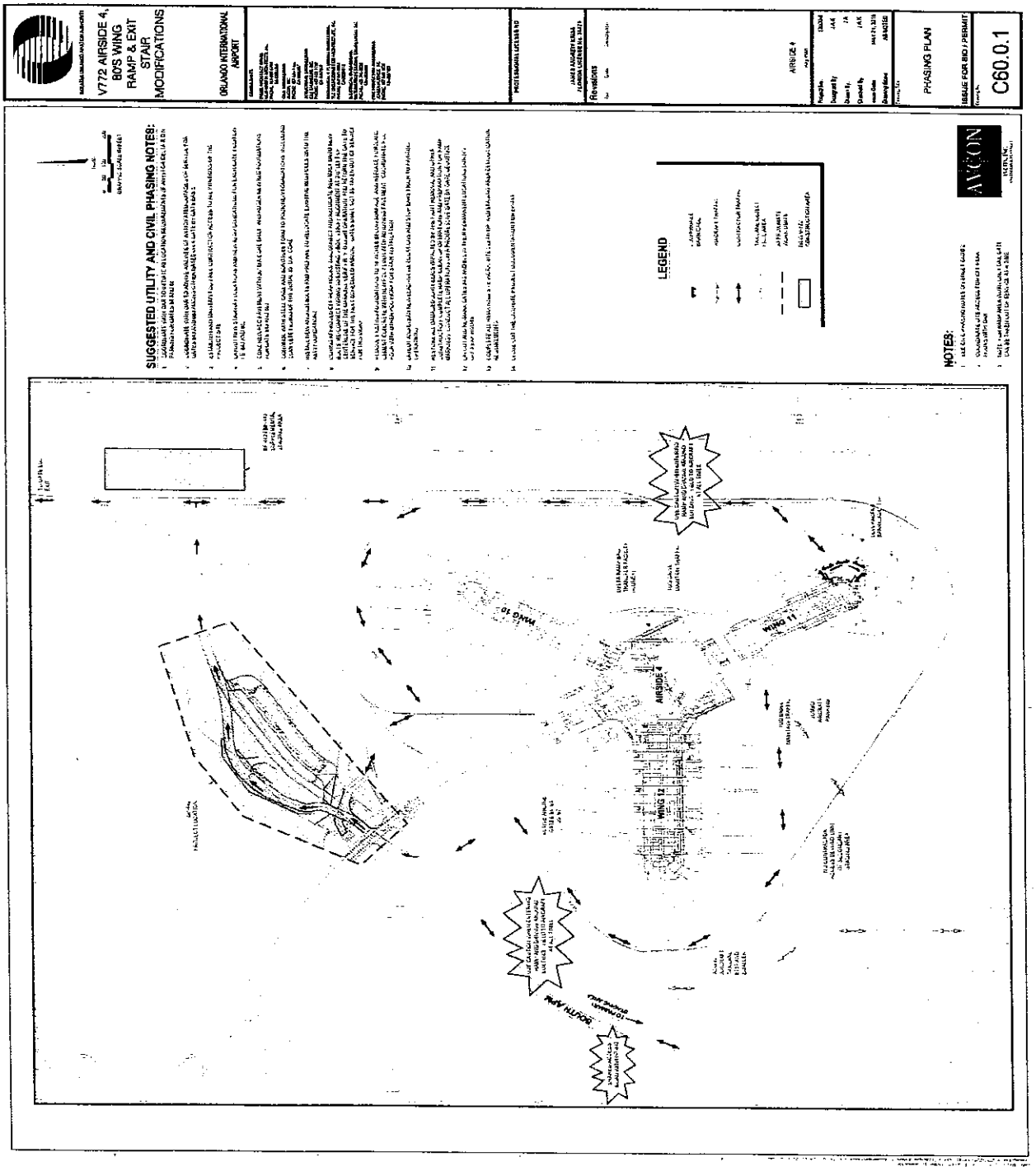


END OF SECTION 00 73 93.0



END OF SECTION 00 73 93.0

SECTION 00 73 93.03 - SPECIAL PROJECT PROCEDURES FOR SENSITIVE SECURITY INFORMATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. 49 CFR parts 15 and 1520

B. Florida Statutes sections 331.22, 119.071, and/or 281.301

C. DHS Fm 11000_6 [Non-disclosure Agreement (NDA)]

1.2 DEFINITIONS

A. SSI: Sensitive Security Information – also noted as (SSI) – is information that, if publicly released, would be detrimental to transportation security, as defined by Federal regulation 49 C.F.R. part 1520. Although SSI is not classified information, there are specific procedures for recognizing, marking, protecting, safely sharing, and destroying SSI. Persons receiving SSI are considered "covered persons" under the SSI regulation in order to carry out responsibilities related to transportation security and are obligated to protect this information from unauthorized disclosure.

1.3 DESCRIPTION

A. General: The following information indicates requirements for access to, control of, and/or distribution of Project Documents Marked as Sensitive Security Information or SSI.

1. You Must – Lock All SSI: Store SSI in a secure container such as a locked file cabinet or drawer (as defined by Federal regulation 49 C.F.R. part 1520.9 (a)(1)).
2. You Must – When No Longer Needed, Destroy SSI: Destruction of SSI must be complete to preclude recognition or reconstruction of the information (as defined by Federal regulation 49 C.F.R. part 1520.19).
3. You Must – Mark SSI: The regulation requires that even when only a small portion of a paper document contains SSI, every page of the document must be marked with the SSI header and footer shown at left (as defined by Federal regulation 49 C.F.R. part 1520.13). Alteration of the footer is not authorized.

B. Reasonable steps must be taken to safeguard SSI. While the regulation does not define reasonable steps, the TSA SSI Branch offers the following best practices as examples of reasonable steps:

1. Use an SSI cover sheet on all SSI materials.
2. Electronic presentations (e.g., PowerPoint) should be marked with the SSI header on all pages and the SSI footer on the first and last pages of the presentation.

3. Spreadsheets should be marked with the SSI header on every page and the SSI footer on every page or at the end of the document.
4. Video and audio should be marked with the SSI header and footer on the protective cover when able and the header and footer should be shown and/or read at the beginning and end of the program.
5. CDs/DVDs should be encrypted or password-protected and the header and footer should be affixed to the CD/DVD.
6. Portable drives including "flash" or "thumb" drives should not themselves be marked, but the drive itself should be encrypted or all SSI documents stored on it should be password protected.
7. When leaving your computer or desk you must lock all SSI and you should lock or turn off your computer.
8. Taking SSI home is not recommended. If necessary, get permission from a supervisor and lock all SSI at home.
9. Do not handle SSI on computers that have peer-to-peer software installed on them or on your home computer.
10. Transmit SSI via email only in a password protected attachment, not in the body of the email. Send the password without identifying information in a separate email or by phone.
11. Passwords for SSI documents should contain at least eight characters, have at least one uppercase and one lowercase letter, contain at least one number, one special character and not be a word in the dictionary.
12. Faxing of SSI should be done by first verifying the fax number and that the intended recipient will be available promptly to retrieve the SSI.
13. SSI should be mailed by U.S. First Class mail or other traceable delivery service using an opaque envelope or wrapping. The outside wrapping (i.e. box or envelope) should not be marked as SSI.
14. Interoffice mail should be sent using an unmarked, opaque, sealed envelope so that the SSI cannot be read through the envelope.
15. SSI stored in network folders should either require a password to open or the network should limit access to the folder to only those with a need to know.
16. Properly destroy SSI using a cross-cut shredder or by cutting manually into less than ½ inch squares.
17. Properly destroy electronic records using any method that will preclude recognition or reconstruction.
18. Maintain an up-to-date record of all SSI Documents and list of persons with access to SSI Documents.

1.4 TRANSMISSION

A. When transmitting SSI, the SSI marking must be applied to the transmittal document (letter, memorandum, or fax). The transmittal document must contain, if applicable, a disclaimer noting that it is no longer SSI when it is detached from the SSI it is transmitting (transmittal e-mails do not need to contain this disclaimer), and a warning that if received by an unintended or different recipient, the sender must be notified immediately.

3. Spreadsheets should be marked with the SSI header on every page and the SSI footer on every page or at the end of the document.
4. Video and audio should be marked with the SSI header and footer on the protective cover when able and the header and footer should be shown and/or read at the beginning and end of the program.
5. CDs/DVDs should be encrypted or password-protected and the header and footer should be affixed to the CD/DVD.
6. Portable drives including "flash" or "thumb" drives should not themselves be marked, but the drive itself should be encrypted or all SSI documents stored on it should be password protected.
7. When leaving your computer or desk you must lock all SSI and you should lock or turn off your computer.
8. Taking SSI home is not recommended. If necessary, get permission from a supervisor and lock all SSI at home.
9. Do not handle SSI on computers that have peer-to-peer software installed on them or on your home computer.
10. Transmit SSI via email only in a password protected attachment, not in the body of the email. Send the password without identifying information in a separate email or by phone.
11. Passwords for SSI documents should contain at least eight characters, have at least one uppercase and one lowercase letter, contain at least one number, one special character and not be a word in the dictionary.
12. Faxing of SSI should be done by first verifying the fax number and that the intended recipient will be available promptly to retrieve the SSI.
13. SSI should be mailed by U.S. First Class mail or other traceable delivery service using an opaque envelope or wrapping. The outside wrapping (i.e. box or envelope) should not be marked as SSI.
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B. When discussing or transmitting SSI to another individual(s), DHS Covered Persons must ensure that the individual with whom the discussion is to be held or the information is to be transferred has a valid Need-to-know. In addition, DHS Covered Persons must ensure that precautions are taken to prevent unauthorized individuals from overhearing the conversation, observing the materials, or otherwise accessing the information.

C. SSI shall be mailed in a manner that offers reasonable protection of the sent materials and sealed in such a manner as to prevent inadvertent opening and show evidence of tampering.

D. SSI may be mailed by U.S. Postal Service First Class Mail or an authorized commercial delivery service such as DHL or Federal Express.

E. SSI may be entered into an inter-office mail system provided it is afforded sufficient protection to prevent unauthorized access, e.g., sealed envelope.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 ACKNOLEDGEMENT OF SENSITIVE SECUITY INFORMATION

A. The Owner has deemed components of this project to be of critical concern due to said component scope. As one of the bidders, you must execute this document to acknowledge the Security Sensitive Information (SSI) requirements and the proper Safeguarding of Sensitive but Unclassified Information.

B. Below is the SSI language from 49 CFR Part 15.13 that will be incorporated into the all construction drawing sheets and on the project manual components that are SSI:

WARNING: This record contains Sensitive Security Information that is controlled under 49 CFR parts 15 and 1520 or that may be otherwise exempt from public disclosure pursuant to Florida Statutes sections 331.22, 119.071, and/or 281.301. No part of this record may be disclosed to persons without a "need to know", as defined in 49 CFR parts 15 and 1520, except with the written permission of both the Greater Orlando Aviation Authority and either the Administrator of the Transportation Security Administration or the Secretary of Transportation. Unauthorized release may result in civil penalty or other action.

C. Attached for your use and records is 49 CFR parts 15 and 1520. By execution of this document you are agreeing to the following:

1. This agreement is completed for the release of both electronic and hard copy bid documents, and any SSI documents related to Orlando International and Orlando Executive airports.

2. I am the duly authorized representative for:

_____
Print Name and Title

_____
Print Authorized Entity

_____
Print Address

3. I have the express authority to sign this agreement and hereby consent to all conditions stated herein, in consideration of my being granted conditional access to certain information, specified in paragraph (1) above, that, is owned by, produced by, or in the possession of the Greater Orlando Aviation Authority.
4. Sensitive Security Information. I attest that I am familiar with, and I will comply with the standards for access, dissemination, handling, and safeguarding of SSI information as cited in this Agreement and in accordance with 49 CFR Part 1520, "Protection of Sensitive Security Information," "Policies and Procedures for Safeguarding and Control of SSI," as amended, and any supplementary guidance issued by an authorized official of the Department of Homeland Security.
5. By being granted conditional access to the information in paragraph (1), indicated above, I am obligated to protect this information from unauthorized disclosure. I will not disclose or release any information provided to me pursuant to this Agreement without proper authority or authorization. Only those persons who have a need to know may handle this information, and I will ensure that they will comply with all maintenance, safeguarding, dissemination, and handling requirements provided in 49 CFR Part 1520.
6. Neither the execution of this agreement nor the release of the records indicated in paragraph (1) above operates as a waiver of the confidential and exempt status of the records.
7. Violation of this nondisclosure agreement or of the attached federal regulations is grounds for a civil penalty and other enforcement or corrective action by DOT and DHS and, if awarded the contract, will be cause for termination.

_____
Signature

_____
Date

2. I am the duly authorized representative for:

Print Name and Title

Print Authorized Entity

Print Address

3. I have the express authority to sign this agreement and hereby consent to all conditions stated herein, in consideration of my being granted conditional access to certain information, specified in paragraph (1) above, that, is owned by, produced by, or in the possession of the Greater Orlando Aviation Authority.
4. Sensitive Security Information. I attest that I am familiar with, and I will comply with the standards for access, dissemination, handling, and safeguarding of SSI information as cited in this Agreement and in accordance with 49 CFR Part 1520, "Protection of Sensitive Security Information," "Policies and Procedures for Safeguarding and Control of SSI," as amended, and any supplementary guidance issued by an authorized official of the Department of Homeland Security.
5. By being granted conditional access to the information in paragraph (1), indicated above, I am obligated to protect this information from unauthorized disclosure. I will not disclose or release any information provided to me pursuant to this Agreement without proper authority or authorization. Only those persons who have a need to know may handle this information, and I will ensure that they will comply with all maintenance, safeguarding, dissemination, and handling requirements provided in 49 CFR Part 1520.
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7. Violation of this nondisclosure agreement or of the attached federal regulations is grounds for a civil penalty and other enforcement or corrective action by DOT and DHS and, if awarded the contract, will be cause for termination.

Signature

Date

3.2 ATTACHMENTS

A. The following documents are attached:

1. 49 CFR Part 15
2. 49 CFR part 1520
3. Sensitive Security Information – Best Practices Guide for Non-DHS Employees and Contractors.
4. Sensitive Security Information – SSI Quick Reference Guide for DHS Employees and Contractors
5. DHS Form 11000-6 (08-04) – Department of Homeland Security Non- Disclosure Agreement.

END OF SECTION

49 CFR Part 15 – Protection of Sensitive Security Information

§ 11.120 Evaluation and disposition of applications and proposals for research to be conducted or supported by a Federal department or agency.

(a) The department or agency head will evaluate all applications and proposals involving human subjects submitted to the Federal department or agency through such officers and employees of the Federal department or agency and such experts and consultants as the department or agency head determines to be appropriate. This evaluation will take into consideration the risks to the subjects, the adequacy of protection against these risks, the potential benefits of the research to the subjects and others, and the importance of the knowledge gained or to be gained.

(b) On the basis of this evaluation, the department or agency head may approve or disapprove the application or proposal, or enter into negotiations to develop an approvable one.

§ 11.121 [Reserved]

§ 11.122 Use of Federal funds.

Federal funds administered by a Federal department or agency may not be expended for research involving human subjects unless the requirements of this policy have been satisfied.

§ 11.123 Early termination of research support: Evaluation of applications and proposals.

(a) The department or agency head may require that Federal department or agency support for any project be terminated or suspended in the manner prescribed in applicable program requirements, when the department or agency head finds an institution has materially failed to comply with the terms of this policy.

(b) In making decisions about supporting or approving applications or proposals covered by this policy the department or agency head may take into account, in addition to all other eligibility requirements and program criteria, factors such as whether the applicant has been subject to a termination or suspension under paragraph (a) of this section and whether the applicant or the person or persons who would direct or has/have directed the scientific and technical aspects of an activity has/have, in the judgment of the department or agency head, materially failed to discharge responsibility for the protection of the rights and welfare of human subjects (whether or not the research was subject to federal regulation).

§ 11.124 Conditions.

With respect to any research project or any class of research projects the department or agency head of either the conducting or the supporting Federal department or agency may impose additional conditions prior to or at the time of approval when in the judgment of the department or agency head additional conditions are necessary for the protection of human subjects.

PART 15—PROTECTION OF SENSITIVE SECURITY INFORMATION

Sec.
15.1 Scope.
15.3 Terms used in this part.
15.5 Sensitive security information.
15.7 Covered persons.
15.9 Restrictions on the disclosure of SSI.
15.11 Persons with a need to know.
15.13 Marking SSI.
15.15 SSI disclosed by DOT.
15.17 Consequences of unauthorized disclosure of SSI.
15.19 Destruction of SSI.

AUTHORITY: 49 U.S.C. 40119.

SOURCE: 69 FR 28078, May 18, 2004, unless otherwise noted.

§ 15.1 Scope.

(a) *Applicability.* This part governs the maintenance, safeguarding, and disclosure of records and information that the Secretary of DOT has determined to be Sensitive Security Information, as defined in § 15.5. This part does not apply to the maintenance, safeguarding, or disclosure of classified national security information, as defined by Executive Order 12968, or to other sensitive unclassified information that is not SSI, but that nonetheless may be exempt from public disclosure under the Freedom of Information Act. In addition, in the case of information that has been designated as critical infrastructure information

49 CFR Part 15 – Protection of Sensitive Security Information

§ 11.120 Evaluation and disposition of applications and proposals for research to be conducted or supported by a Federal department or agency.

(a) The department or agency head will evaluate all applications and proposals involving human subjects submitted to the Federal department or agency through such officers and employees of the Federal department or agency and such experts and consultants as the department or agency head determines to be appropriate. This evaluation will take into consideration the risks to the subjects, the adequacy of protection against these risks, the potential benefits of the research to the subjects and others, and the importance of the knowledge gained or to be gained.

(b) On the basis of this evaluation, the department or agency head may approve or disapprove the application or proposal, or enter into negotiations to develop an approvable one.

§ 11.121 [Reserved]

§ 11.122 Use of Federal funds.

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§ 11.123 Early termination of research support: Evaluation of applications and proposals.

(a) The department or agency head may require that Federal department or agency support for any project be terminated or suspended in the manner prescribed in applicable program requirements, when the department or agency head finds an institution has materially failed to comply with the terms of this policy.

(b) In making decisions about supporting or approving applications or proposals covered by this policy the department or agency head may take into account, in addition to all other eligibility requirements and program criteria, factors such as whether the applicant has been subject to a termination or suspension under paragraph (a) of this section and whether the applicant or the person or persons who would direct or has/have directed the scientific and technical aspects of an activity has/have, in the judgment of the department or agency head, materially failed to discharge responsibility for the protection of the rights and welfare of human subjects (whether or not the research was subject to federal regulation).

§ 11.124 Conditions.

With respect to any research project or any class of research projects the department or agency head of either the conducting or the supporting Federal department or agency may impose additional conditions prior to or at the time of approval when in the judgment of the department or agency head additional conditions are necessary for the protection of human subjects.

PART 15—PROTECTION OF SENSITIVE SECURITY INFORMATION

Sec.

15.1 Scope.
15.3 Terms used in this part.
15.5 Sensitive security information.
15.7 Covered persons.
15.9 Restrictions on the disclosure of SSI.
15.11 Persons with a need to know.
15.13 Marking SSI.
15.15 SSI disclosed by DOT.
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15.19 Destruction of SSI.

AUTHORITY: 49 U.S.C. 40119.

SOURCE: 69 FR 28078, May 18, 2004, unless otherwise noted.

§ 15.1 Scope.

(a) *Applicability.* This part governs the maintenance, safeguarding, and disclosure of records and information that the Secretary of DOT has determined to be Sensitive Security Information, as defined in § 15.5. This part does not apply to the maintenance, safeguarding, or disclosure of classified national security information, as defined by Executive Order 12958, or to other sensitive unclassified information that is not SSI, but that nonetheless may be exempt from public disclosure under the Freedom of Information Act. In addition, in the case of information that has been designated as critical infrastructure information

under section 214 of the Homeland Security Act, the receipt, maintenance, or disclosure of such information by a Federal agency or employee is governed by section 214 and any implementing regulations, not by this part.

(b) *Delegation.* The authority of the Secretary under this part may be further delegated within DOT.

§ 15.3 Terms used in this part.

In addition to the terms in § 15.3 of this chapter, the following terms apply in this part:

Administrator means the Under Secretary of Transportation for Security referred to in 49 U.S.C. 114(b), or his or her designee.

Coast Guard means the United States Coast Guard.

Covered person means any organization, entity, individual, or other person described in § 15.7. In the case of an individual, *covered person* includes any individual applying for employment in a position that would be a covered person, or in training for such a position, regardless of whether that individual is receiving a wage, salary, or other form of payment. *Covered person* includes a person applying for certification or other form of approval that, if granted, would make the person a covered person described in § 15.7.

DHS means the Department of Homeland Security and any directorate, bureau, or other component within the Department of Homeland Security, including the United States Coast Guard.

DOT means the Department of Transportation and any operating administration, entity, or office within the Department of Transportation, including the Saint Lawrence Seaway Development Corporation and the Bureau of Transportation Statistics.

Federal Flight Deck Officer means a pilot participating in the Federal Flight Deck Officer Program under 49 U.S.C. 44921 and implementing regulations.

Maritime facility means any facility as defined in 33 CFR part 101.

Record includes any means by which information is preserved, irrespective of format, including a book, paper, drawing, map, recording, tape, film, photograph, machine-readable material, and any information stored in an electronic format. The term *record* also includes any draft, proposed, or recommended change to any record.

Security contingency plan means a plan detailing response procedures to address a transportation security incident, threat assessment, or specific threat against transportation, including details of preparation, response, mitigation, recovery, and reconstitution procedures, continuity of government, continuity of transportation operations, and crisis management.

Security program means a program or plan and any amendments developed for the security of the following, including any comments, instructions, or implementing guidance:

(1) An airport, aircraft, or aviation cargo operation;

(2) A maritime facility, vessel, or port area; or

(3) A transportation-related automated system or network for information processing, control, and communications.

Security screening means evaluating a person or property to determine whether either poses a threat to security.

SSI means sensitive security information, as described in § 15.5.

Threat image projection system means an evaluation tool that involves periodic presentation of fictional threat images to operators and is used in connection with x-ray or explosives detection systems equipment.

TSA means the Transportation Security Administration.

Vulnerability assessment means any review, audit, or other examination of the security of a transportation infrastructure asset; airport; maritime facility, port area, vessel, aircraft, train, commercial motor vehicle, or pipeline, or a transportation-related automated system or network, to determine its vulnerability to unlawful interference, whether during the conception, planning, design, construction, operation, or decommissioning phase. A *vulnerability assessment* may include proposed, recommended, or directed actions or countermeasures to address security concerns.

§ 15.5 Sensitive security information.

(a) *In general.* In accordance with 49 U.S.C. 40119(b)(1), SSI is information

Office of the Secretary of Transportation **§ 15.5**

obtained or developed in the conduct of security activities, including research and development, the disclosure of which the Secretary of DOT has determined would—

(1) Constitute an unwarranted invasion of privacy (including, but not limited to, information contained in any personnel, medical, or similar file);

(2) Reveal trade secrets or privileged or confidential information obtained from any person; or

(3) Be detrimental to transportation safety.

(b) *Information constituting SSI.* Except as otherwise provided in writing by the Secretary of DOT in the interest of public safety or in furtherance of transportation security, the following information, and records containing such information, constitute SSI:

(1) *Security programs and contingency plans.* Any security program or security contingency plan issued, established, required, received, or approved by DOT or DHS, including—

(i) Any aircraft operator or airport operator security program or security contingency plan under this chapter;

(ii) Any vessel, maritime facility, or port area security plan required or directed under Federal law;

(iii) Any national or area security plan prepared under 46 U.S.C. 70103; and

(iv) Any security incident response plan established under 46 U.S.C. 70104.

(2) *Security Directives.* Any Security Directive or order—

(i) Issued by TSA under 49 CFR 1542.303, 1544.305, or other authority;

(ii) Issued by the Coast Guard under the Maritime Transportation Security Act, 33 CFR part 6, or 33 U.S.C. 1221 *et seq.* related to maritime security; or

(iii) Any comments, instructions, and implementing guidance pertaining thereto.

(3) *Information Circulars.* Any notice issued by DHS or DOT regarding a threat to aviation or maritime transportation, including any—

(i) Information Circular issued by TSA under 49 CFR 1542.303 or 1544.305, or other authority; and

(ii) Navigation or Vessel Inspection Circular issued by the Coast Guard related to maritime security.

(4) *Performance specifications.* Any performance specification and any description of a test object or test procedure, for—

(i) Any device used by the Federal government or any other person pursuant to any aviation or maritime transportation security requirements of Federal law for the detection of any weapon, explosive, incendiary, or destructive device or substance; and

(ii) Any communications equipment used by the Federal government or any other person in carrying out or complying with any aviation or maritime transportation security requirements of Federal law.

(5) *Vulnerability assessments.* Any vulnerability assessment directed, created, held, funded, or approved by the DOT, DHS, or that will be provided to DOT or DHS in support of a Federal security program.

(6) *Security inspection or investigative information.* (i) Details of any security inspection or investigation of an alleged violation of aviation or maritime transportation security requirements of Federal law that could reveal a security vulnerability, including the identity of the Federal special agent or other Federal employee who conducted the inspection or audit.

(ii) In the case of inspections or investigations performed by TSA, this includes the following information as to events that occurred within 12 months of the date of release of the information: the name of the airport where a violation occurred, the airport identifier in the case number, a description of the violation, the regulation allegedly violated, and the identity of any aircraft operator in connection with specific locations or specific security procedures. Such information will be released after the relevant 12-month period, except that TSA will not release the specific gate or other location on an airport where an event occurred, regardless of the amount of time that has passed since its occurrence. During the period within 12 months of the date of release of the information, TSA may release summaries of an aircraft operator's, but not an airport operator's, total security violations in a specified time range without identifying specific violations or locations. Summaries may include total enforcement actions, total proposed civil penalty amounts,

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obtained or developed in the conduct of security activities, including research and development, the disclosure of which the Secretary of DOT has determined would—

(1) Constitute an unwarranted invasion of privacy (including, but not limited to, information contained in any personnel, medical, or similar file);

(2) Reveal trade secrets or privileged or confidential information obtained from any person; or

(3) Be detrimental to transportation safety.

(b) *Information constituting SSI.* Except as otherwise provided in writing by the Secretary of DOT in the interest of public safety or in furtherance of transportation security, the following information, and records containing such information, constitute SSI:

(1) *Security programs and contingency plans.* Any security program or security contingency plan issued, established, required, received, or approved by DOT or DHS, including—

(i) Any aircraft operator or airport operator security program or security contingency plan under this chapter;

(ii) Any vessel, maritime facility, or port area security plan required or directed under Federal law;

(iii) Any national or area security plan prepared under 46 U.S.C. 70103; and

(iv) Any security incident response plan established under 46 U.S.C. 70104.

(2) *Security Directives.* Any Security Directive or order—

(i) Issued by TSA under 49 CFR 1542.303, 1544.305, or other authority;

(ii) Issued by the Coast Guard under the Maritime Transportation Security Act, 33 CFR part 6, or 33 U.S.C. 1221 *et seq.* related to maritime security; or

(iii) Any comments, instructions, and implementing guidance pertaining thereto.

(3) *Information Circulars.* Any notice issued by DHS or DOT regarding a threat to aviation or maritime transportation, including any—

(i) Information Circular issued by TSA under 49 CFR 1542.303 or 1544.305, or other authority; and

(ii) Navigation or Vessel Inspection Circular issued by the Coast Guard related to maritime security.

(4) *Performance specifications.* Any performance specification and any description of a test object or test procedure, for—

(i) Any device used by the Federal government or any other person pursuant to any aviation or maritime transportation security requirements of Federal law for the detection of any weapon, explosive, incendiary, or destructive device or substance; and

(ii) Any communications equipment used by the Federal government or any other person in carrying out or complying with any aviation or maritime transportation security requirements of Federal law.

(5) *Vulnerability assessments.* Any vulnerability assessment directed, created, held, funded, or approved by the DOT, DHS, or that will be provided to DOT or DHS in support of a Federal security program.

(6) *Security inspection or investigative information.* (i) Details of any security inspection or investigation of an alleged violation of aviation or maritime transportation security requirements of Federal law that could reveal a security vulnerability, including the identity of the Federal special agent or other Federal employee who conducted the inspection or audit.

(ii) In the case of inspections or investigations performed by TSA, this includes the following information as to events that occurred within 12 months of the date of release of the information: the name of the airport where a violation occurred, the airport identifier in the case number, a description of the violation, the regulation allegedly violated, and the identity of any aircraft operator in connection with specific locations or specific security procedures. Such information will be released after the relevant 12-month period, except that TSA will not release the specific gate or other location on an airport where an event occurred, regardless of the amount of time that has passed since its occurrence. During the period within 12 months of the date of release of the information, TSA may release summaries of an aircraft operator's, but not an airport operator's, total security violations in a specified time range without identifying specific violations or locations. Summaries may include total enforcement actions, total proposed civil penalty amounts,

DOT or DHS as critical to aviation or maritime transportation safety or security, including automated information security procedures and systems, security inspections, and vulnerability information concerning those systems.

(14) *Confidential business information.* (i) Solicited or unsolicited proposals received by DHS or DOT, and negotiations arising therefrom, to perform work pursuant to a grant, contract, cooperative agreement, or other transaction, but only to the extent that the subject matter of the proposal relates to aviation or maritime transportation security measures;

(ii) Trade secret information, including information required or requested by regulation or Security Directive, obtained by DHS or DOT in carrying out aviation or maritime transportation security responsibilities; and

(iii) Commercial or financial information, including information required or requested by regulation or Security Directive, obtained by DHS or DOT in carrying out aviation or maritime transportation security responsibilities, but only if the source of the information does not customarily disclose it to the public.

(15) *Research and development.* Information obtained or developed in the conduct of research related to aviation or maritime transportation security activities, where such research is approved, accepted, funded, recommended, or directed by the DHS or DOT, including research results.

(16) *Other information.* Any information not otherwise described in this section that TSA determines is SSI under 49 U.S.C. 114(s) or that the Secretary of DOT determines is SSI under 49 U.S.C. 40119. Upon the request of another Federal agency, the Secretary of DOT may designate as SSI information not otherwise described in this section.

(c) *Loss of SSI designation.* The Secretary of DOT may determine in writing that information or records described in paragraph (b) of this section do not constitute SSI because they no longer meet the criteria set forth in paragraph (a) of this section.

§ 15.7 Covered persons.

Persons subject to the requirements of part 15 are:

(a) Each airport operator and aircraft operator subject to the requirements of Subchapter C of this title.

(b) Each indirect air carrier, as defined in 49 CFR 1540.5.

(c) Each owner, charterer, or operator of a vessel, including foreign vessel owners, charterers, and operators, required to have a security plan under Federal or International law.

(d) Each owner or operator of a maritime facility required to have a security plan under the Maritime Transportation Security Act, (Pub. L. 107–295), 46 U.S.C. 70101 *et seq.*, 33 CFR part 6, or 33 U.S.C. 1221 *et seq.*

(e) Each person performing the function of a computer reservation system or global distribution system for airline passenger information.

(f) Each person participating in a national or area security committee established under 46 U.S.C. 70112, or a port security committee.

(g) Each industry trade association that represents covered persons and has entered into a non-disclosure agreement with the DHS or DOT.

(h) DHS and DOT.

(i) Each person conducting research and development activities that relate to aviation or maritime transportation security and are approved, accepted, funded, recommended, or directed by DHS or DOT.

(j) Each person who has access to SSI, as specified in § 15.11.

(k) Each person employed by, contracted to, or acting for a covered person, including a grantee of DHS or DOT, and including a person formerly in such position.

(l) Each person for which a vulnerability assessment has been directed, created, held, funded, or approved by the DOT, DHS, or that has prepared a vulnerability assessment that will be provided to DOT or DHS in support of a Federal security program.

(m) Each person receiving SSI under § 1520.15(d) or (e).

§ 15.9 Restrictions on the disclosure of SSI.

(a) *Duty to protect information.* A covered person must—

(1) Take reasonable steps to safeguard SSI in that person's possession

or control from unauthorized disclosure. When a person is not in physical possession of SSI, the person must store it a secure container, such as a locked desk or file cabinet or in a locked room.

(2) Disclose, or otherwise provide access to, SSI only to covered persons who have a need to know, unless otherwise authorized in writing by TSA, the Coast Guard, or the Secretary of DOT.

(3) Refer requests by other persons for SSI to TSA or the applicable component or agency within DOT or DHS.

(4) Mark SSI as specified in § 15.13.

(5) Dispose of SSI as specified in § 15.19.

(b) *Unmarked SSI.* If a covered person receives a record containing SSI that is not marked as specified in § 1520.13, the covered person must—

(1) Mark the record as specified in § 15.13; and

(2) Inform the sender of the record that the record must be marked as specified in § 15.13.

(c) *Duty to report unauthorized disclosure.* When a covered person becomes aware that SSI has been released to unauthorized persons, the covered person must promptly inform TSA or the applicable DOT or DHS component or agency.

(d) *Additional requirements for critical infrastructure information.* In the case of information that is both SSI and has been designated as critical infrastructure information under section 214 of the Homeland Security Act, any covered person who is a Federal employee in possession of such information must comply with the disclosure restrictions and other requirements applicable to such information under section 214 and any implementing regulations.

§ 15.11 Persons with a need to know.

(a) *In general.* A person has a need to know SSI in each of the following circumstances:

(1) When the person requires access to specific SSI to carry out transportation security activities approved, accepted, funded, recommended, or directed by DHS or DOT.

(2) When the person is in training to carry out transportation security activities approved, accepted, funded, recommended, or directed by DHS or DOT.

(3) When the information is necessary for the person to supervise or otherwise manage individuals carrying out transportation security activities approved, accepted, funded, recommended, or directed by DHS or DOT.

(4) When the person needs the information to provide technical or legal advice to a covered person regarding transportation security requirements of Federal law.

(5) When the person needs the information to represent a covered person in connection with any judicial or administrative proceeding regarding those requirements.

(b) *Federal employees, contractors, and grantees.* (1) A Federal employee has a need to know SSI if access to the information is necessary for performance of the employee's official duties.

(2) A person acting in the performance of a contract with or grant from DHS or DOT has a need to know SSI if access to the information is necessary to performance of the contract or grant.

(c) *Background check.* The Secretary of DOT may make an individual's access to the SSI contingent upon satisfactory completion of a security background check and the imposition of procedures and requirements for safeguarding SSI that are satisfactory to the Secretary.

(d) *Need to know further limited by the DHS or DOT.* For some specific SSI, DHS or DOT may make a finding that only specific persons or classes of persons have a need to know.

[69 FR 28078, May 18, 2004, as amended at 70 FR 1381, Jan. 7, 2005]

§ 15.13 Marking SSI.

(a) *Marking of paper records.* In the case of paper records containing SSI, a covered person must mark the record by placing the protective marking conspicuously on the top, and the distribution limitation statement on the bottom, of—

(1) The outside of any front and back cover, including a binder cover or folder, if the document has a front and back cover;

(2) Any title page; and

(3) Each page of the document.

or control from unauthorized disclosure. When a person is not in physical possession of SSI, the person must store it a secure container, such as a locked desk or file cabinet or in a locked room.

(2) Disclose, or otherwise provide access to, SSI only to covered persons who have a need to know, unless otherwise authorized in writing by TSA, the Coast Guard, or the Secretary of DOT.

(3) Refer requests by other persons for SSI to TSA or the applicable component or agency within DOT or DHS.

(4) Mark SSI as specified in § 15.13.

(5) Dispose of SSI as specified in § 15.19.

(b) *Unmarked SSI.* If a covered person receives a record containing SSI that is not marked as specified in § 1520.13, the covered person must—

(1) Mark the record as specified in § 15.13; and

(2) Inform the sender of the record that the record must be marked as specified in § 15.13.

(c) *Duty to report unauthorized disclosure.* When a covered person becomes aware that SSI has been released to unauthorized persons, the covered person must promptly inform TSA or the applicable DOT or DHS component or agency.

(d) *Additional requirements for critical infrastructure information.* In the case of information that is both SSI and has been designated as critical infrastructure information under section 214 of the Homeland Security Act, any covered person who is a Federal employee in possession of such information must comply with the disclosure restrictions and other requirements applicable to such information under section 214 and any implementing regulations.

§ 15.11 Persons with a need to know.

(a) *In general.* A person has a need to know SSI in each of the following circumstances:

(1) When the person requires access to specific SSI to carry out transportation security activities approved, accepted, funded, recommended, or directed by DHS or DOT.

(2) When the person is in training to carry out transportation security activities approved, accepted, funded, recommended, or directed by DHS or DOT.

(3) When the information is necessary for the person to supervise or otherwise manage individuals carrying out transportation security activities approved, accepted, funded, recommended, or directed by the DHS or DOT.

(4) When the person needs the information to provide technical or legal advice to a covered person regarding transportation security requirements of Federal law.

(5) When the person needs the information to represent a covered person in connection with any judicial or administrative proceeding regarding those requirements.

(b) *Federal employees, contractors, and grantees.* (1) A Federal employee has a need to know SSI if access to the information is necessary for performance of the employee's official duties.

(2) A person acting in the performance of a contract with or grant from DHS or DOT has a need to know SSI if access to the information is necessary to performance of the contract or grant.

(c) *Background check.* The Secretary of DOT may make an individual's access to the SSI contingent upon satisfactory completion of a security background check and the imposition of procedures and requirements for safeguarding SSI that are satisfactory to the Secretary.

(d) *Need to know further limited by the DHS or DOT.* For some specific SSI, DHS or DOT may make a finding that only specific persons or classes of persons have a need to know.

[69 FR 28078, May 18, 2004, as amended at 70 FR 1381, Jan. 7, 2005]

§ 15.13 Marking SSI.

(a) *Marking of paper records.* In the case of paper records containing SSI, a covered person must mark the record by placing the protective marking conspicuously on the top, and the distribution limitation statement on the bottom, of—

(1) The outside of any front and back cover, including a binder cover or folder, if the document has a front and back cover;

(2) Any title page; and

(3) Each page of the document.

(b) *Protective marking.* The protective marking is: SENSITIVE SECURITY INFORMATION.

(c) *Distribution limitation statement.* The distribution limitation statement is:

WARNING. This record contains Sensitive Security Information that is controlled under 49 CFR parts 15 and 1520. No part of this record may be disclosed to persons without a "need to know", as defined in 49 CFR parts 15 and 1520, except with the written permission of the Administrator of the Transportation Security Administration or the Secretary of Transportation. Unauthorized release may result in civil penalty or other action. For U.S. government agencies, public disclosure is governed by 5 U.S.C. 552 and 49 CFR parts 15 and 1520.

(d) *Other types of records.* In the case of non-paper records that contain SSI, including motion picture films, videotape recordings, audio recording, and electronic and magnetic records, a covered person must clearly and conspicuously mark the records with the protective marking and the distribution limitation statement such that the viewer or listener is reasonably likely to see or hear them when obtaining access to the contents of the record.

§ 15.15 SSI disclosed by DOT.

(a) *In general.* Except as otherwise provided in this section, and notwithstanding the Freedom of Information Act (5 U.S.C. 552), the Privacy Act (5 U.S.C. 552a), and other laws, records containing SSI are not available for public inspection or copying, nor does DOT release such records to persons without a need to know.

(b) *Disclosure under the Freedom of Information Act and the Privacy Act.* If a record contains both SSI and information that is not SSI, DOT, on a proper Freedom of Information Act or Privacy Act request, may disclose the record with the SSI redacted, provided the record is not otherwise exempt from disclosure under the Freedom of Information Act or Privacy Act.

(c) *Disclosures to committees of Congress and the General Accounting Office.* Nothing in this part precludes DOT from disclosing SSI to a committee of Congress authorized to have the information or to the Comptroller General, or to any authorized representative of the Comptroller General.

(d) *Disclosure in enforcement proceedings*—(1) *In general.* The Secretary of DOT may provide SSI to a person in the context of an administrative enforcement proceeding when, in the sole discretion of the Secretary, access to the SSI is necessary for the person to prepare a response to allegations contained in a legal enforcement action document issued by DOT.

(2) *Security background check.* Prior to providing SSI to a person under paragraph (d)(1) of this section, the Secretary of DOT may require the individual or, in the case of an entity, the individuals representing the entity, and their counsel, to undergo and satisfy, in the judgment of the Secretary of DOT, a security background check.

(e) *Other conditional disclosure.* The Secretary of DOT may authorize a conditional disclosure of specific records or information that constitute SSI upon the written determination by the Secretary that disclosure of such records or information, subject to such limitations and restrictions as the Secretary may prescribe, would not be detrimental to transportation safety.

(f) *Obligation to protect information.* When an individual receives SSI pursuant to paragraph (d) or (e) of this section that individual becomes a covered person under § 15.7 and is subject to the obligations of a covered person under this part.

(g) *No release under FOIA.* When DOT discloses SSI pursuant to paragraphs (b) through (e) of this section, DOT makes the disclosure for the sole purpose described in that paragraph. Such disclosure is not a public release of information under the Freedom of Information Act.

(h) *Disclosure of Critical Infrastructure Information.* Disclosure of information that is both SSI and has been designated as critical infrastructure information under section 214 of the Homeland Security Act is governed solely by the requirements of section 214 and any implementing regulations.

§ 15.17 Consequences of unauthorized disclosure of SSI.

Violation of this part is grounds for a civil penalty and other enforcement or corrective action by DOT, and appropriate personnel actions for Federal

employees. Corrective action may include issuance of an order requiring retrieval of SSI to remedy unauthorized disclosure or an order to cease future unauthorized disclosure.

§ 15.19 Destruction of SSI.

(a) *DOT.* Subject to the requirements of the Federal Records Act (5 U.S.C. 1301, including the duty to preserve records containing documentation of a Federal agency's policies, decisions, and essential transactions, DOT destroys SSI when no longer needed to carry out the agency's function.

(b) *Other covered persons.*—(1) *In general.* A covered person must destroy SSI completely to preclude recognition or reconstruction of the information when the covered person no longer needs the SSI to carry out transportation security measures.

(2) *Exception.* Paragraph (b)(1) of this section does not require a State or local government agency to destroy information that the agency is required to preserve under State or local law.

PART 17—INTERGOVERNMENTAL REVIEW OF DEPARTMENT OF TRANSPORTATION PROGRAMS AND ACTIVITIES

Sec.

17.1 What is the purpose of these regulations?
17.2 What definitions apply to these regulations?
17.3 What programs and activities of the Department are subject to these regulations?
17.4 [Reserved]
17.5 What is the Secretary's obligation with respect to Federal interagency coordination?
17.6 What procedures apply to the selection of programs and activities under these regulations?
17.7 How does the Secretary communicate with state and local officials concerning the Department's programs and activities?
17.8 How does the Secretary provide states an opportunity to comment on proposed Federal financial assistance and direct Federal development?
17.9 How does the Secretary receive and respond to comments?
17.10 How does the Secretary make efforts to accommodate intergovernmental concerns?
17.11 What are the Secretary's obligations in interstate situations?
17.12 How may a state simplify, consolidate, or substitute federally required state plans?
17.13 May the Secretary waive any provision of these regulations?

AUTHORITY: Executive Order 12372, July 14, 1982 (47 FR 30959), as amended April 8, 1983 (48 FR 15887); sec. 401 of the Intergovernmental Cooperation Act of 1968, as amended (31 U.S.C. 6506); sec. 204 of the Demonstration Cities and Metropolitan Development Act of 1966, as amended (42 U.S.C. 3334).

SOURCE: 48 FR 29272, June 24, 1983, unless otherwise noted.

§ 17.1 What is the purpose of these regulations?

(a) The regulations in this part implement Executive Order 12372, "Intergovernmental Review of Federal Programs," issued July 14, 1982, and amended on April 8, 1983. These regulations also implement applicable provisions of section 401 of the Intergovernmental Cooperation Act of 1968 and section 204 of the Demonstration Cities and Metropolitan Development Act of 1966.

(b) These regulations are intended to foster an intergovernmental partnership and a strengthened Federalism by relying on state processes and on state, areawide, regional and local coordination for review of proposed Federal financial assistance and direct Federal development.

(c) These regulations are intended to aid the internal management of the Department, and are not intended to create any right or benefit enforceable at law by a party against the Department or its officers.

§ 17.2 What definitions apply to these regulations?

Department means the U.S. Department of Transportation.

Order means Executive Order 12372, issued July 14, 1982, and amended April 8, 1983, and titled "Intergovernmental Review of Federal Programs."

Secretary means the Secretary of the U.S. Department of Transportation or an official or employee of the Department acting for the Secretary under a delegation of authority.

employees. Corrective action may include issuance of an order requiring retrieval of SSI to remedy unauthorized disclosure or an order to cease future unauthorized disclosure.

§ 15.19 Destruction of SSI.

(a) *DOT.* Subject to the requirements of the Federal Records Act (5 U.S.C. 105), including the duty to preserve records containing documentation of a Federal agency's policies, decisions, and essential transactions, DOT destroys SSI when no longer needed to carry out the agency's function.

(b) *Other covered persons.*—(1) *In general.* A covered person must destroy SSI completely to preclude recognition or reconstruction of the information when the covered person no longer needs the SSI to carry out transportation security measures.

(2) *Exception.* Paragraph (b)(1) of this section does not require a State or local government agency to destroy information that the agency is required to preserve under State or local law.

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(c) These regulations are intended to aid the internal management of the Department, and are not intended to create any right or benefit enforceable at law by a party against the Department or its officers.

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Secretary means the Secretary of the U.S. Department of Transportation or an official or employee of the Department acting for the Secretary under a delegation of authority.

49 CFR Part 1520 – Protection of Sensitive Security Information

Displaying title 49, up to date as of 9/27/2021. Title 49 was last amended 9/27/2021.

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Title 49

PART 1520 - PROTECTION OF SENSITIVE SECURITY INFORMATION

Authority: 46 U.S.C. 70102-70106, 70117; 49 U.S.C. 114, 40113, 44901-44907, 44913-44914, 44916-44918, 44935-44936, 44942, 46105.

Source: 69 FR 28082, May 18, 2004, unless otherwise noted.

§ 1520.1 Scope.

(a) *Applicability.* This part governs the maintenance, safeguarding, and disclosure of records and information that TSA has determined to be Sensitive Security Information, as defined in § 1520.5. This part does not apply to the maintenance, safeguarding, or disclosure of classified national security information, as defined by Executive Order 12968, or to other sensitive unclassified information that is not SSI, but that nonetheless may be exempt from public disclosure under the Freedom of Information Act. In addition, in the case of information that has been designated as critical infrastructure information under section 214 of the Homeland Security Act, the receipt, maintenance, or disclosure of such information by a Federal agency or employee is governed by section 214 and any implementing regulations, not by this part.

(b) *Delegation.* The authority of TSA and the Coast Guard under this part may be further delegated within TSA and the Coast Guard, respectively.

§ 1520.3 Terms used in this part.

In addition to the terms in § 1500.3 of this chapter, the following terms apply in this part:

Administrator means the Under Secretary of Transportation for Security referred to in 49 U.S.C. 114(b), or his or her designee.

Coast Guard means the United States Coast Guard.

Covered person means any organization, entity, individual, or other person described in § 1520.7. In the case of an individual, *covered person* includes any individual applying for employment in a position that would be a covered person, or in training for such a position, regardless of whether that individual is receiving a wage, salary, or other form of payment. *Covered person* includes a person applying for certification or other form of approval that, if granted, would make the person a covered person described in § 1520.7.

Federal Flight Deck Officer means a pilot participating in the Federal Flight Deck Officer Program under 49 U.S.C. 44921 and implementing regulations.

Maritime facility means any facility as defined in 33 CFR part 101.

Rail secure area means "rail secure area" as defined in 49 CFR 1580.3.

Railroad carrier means "railroad carrier" as defined in 49 U.S.C. 20102(2).

Security contingency plan means a plan detailing response procedures to address a transportation security incident, threat assessment, or specific threat against transportation, including details of preparation, response, mitigation, recovery, and reconstitution procedures, continuity of government, continuity of transportation operations, and crisis management.

Security screening means evaluating a person or property to determine whether either poses a threat to security.

SSI means sensitive security information, as described in § 1520.5.

Threat image projection system means an evaluation tool that involves periodic presentation of fictional threat images to operators and is used in connection with x-ray or explosives detection systems equipment.

TSA means the Transportation Security Administration.

[69 FR 28082, May 18, 2004, as amended at 70 FR 41599, July 19, 2005; 73 FR 72172, Nov. 26, 2008; 74 FR 47695, Sept. 16, 2009; 85 FR 16499, Mar. 23, 2020]

§ 1520.5 Sensitive security information.

(a) *In general.* In accordance with 49 U.S.C. 114(s), SSI is information obtained or developed in the conduct of security activities, including research and development, the disclosure of which TSA has determined would -

(1) Constitute an unwarranted invasion of privacy (including, but not limited to, information contained in any personnel, medical, or similar file);

(2) Reveal trade secrets or privileged or confidential information obtained from any person; or

(3) Be detrimental to the security of transportation.

In addition to the terms in § 1500.3 of this chapter, the following terms apply in this part:

Administrator means the Under Secretary of Transportation for Security referred to in 49 U.S.C. 114(b), or his or her designee.

Coast Guard means the United States Coast Guard.

Covered person means any organization, entity, individual, or other person described in § 1520.7. In the case of an individual, *covered person* includes any individual applying for employment in a position that would be a covered person, or in training for such a position, regardless of whether that individual is receiving a wage, salary, or other form of payment. *Covered person* includes a person applying for certification or other form of approval that, if granted, would make the person a covered person described in § 1520.7.

Federal Flight Deck Officer means a pilot participating in the Federal Flight Deck Officer Program under 49 U.S.C. 44921 and implementing regulations.

Maritime facility means any facility as defined in 33 CFR part 101.

Rail secure area means "rail secure area" as defined in 49 CFR 1580.3.

Railroad carrier means "railroad carrier" as defined in 49 U.S.C. 20102(2).

Security contingency plan means a plan detailing response procedures to address a transportation security incident, threat assessment, or specific threat against transportation, including details of preparation, response, mitigation, recovery, and reconstitution procedures, continuity of government, continuity of transportation operations, and crisis management.

Security screening means evaluating a person or property to determine whether either poses a threat to security.

SSI means sensitive security information, as described in § 1520.5.

Threat image projection system means an evaluation tool that involves periodic presentation of fictional threat images to operators and is used in connection with x-ray or explosives detection systems equipment.

TSA means the Transportation Security Administration.

[69 FR 28082, May 18, 2004, as amended at 70 FR 41599, July 19, 2005; 73 FR 72172, Nov. 26, 2008; 74 FR 47695, Sept. 16, 2009; 85 FR 16499, Mar. 23, 2020]

§ 1520.5 Sensitive security information.

(a) *In general.* In accordance with 49 U.S.C. 114(s), SSI is information obtained or developed in the conduct of security activities, including research and development, the disclosure of which TSA has determined would -

(1) Constitute an unwarranted invasion of privacy (including, but not limited to, information contained in any personnel, medical, or similar file);

(2) Reveal trade secrets or privileged or confidential information obtained from any person; or

(3) Be detrimental to the security of transportation.

(b) ***Information constituting SSI.*** Except as otherwise provided in writing by TSA in the interest of public safety or in furtherance of transportation security, the following information, and records containing such information, constitute SSI:

(1) ***Security programs, security plans, and contingency plans.*** Any security program, security plan, or security contingency plan issued, established, required, received, or approved by DHS or DOT, including any comments, instructions, or implementing guidance, including -

(i) Any aircraft operator, airport operator, fixed base operator, or air cargo security program, or security contingency plan under this chapter;

(ii) Any vessel, maritime facility, or port area security plan required or directed under Federal law;

(iii) Any national or area security plan prepared under 46 U.S.C. 70103;

(iv) Any security incident response plan established under 46 U.S.C. 70104, and

(v) Any security program or plan required under subchapter D of this title.

(2) ***Security Directives.*** Any Security Directive or order -

(i) Issued by TSA under 49 CFR 1542.303, 1544.305, 1548.19, or other authority;

(ii) Issued by the Coast Guard under the Maritime Transportation Security Act, 33 CFR part 6, or 33 U.S.C. 1221 *et seq.* related to maritime security; or

(iii) Any comments, instructions, and implementing guidance pertaining thereto.

(3) ***Information Circulars.*** Any notice issued by DHS or DOT regarding a threat to aviation or maritime transportation, including any -

(i) Information circular issued by TSA under 49 CFR 1542.303, 1544.305, 1548.19, or other authority; and

(ii) Navigation or Vessel Inspection Circular issued by the Coast Guard related to maritime security.

(4) ***Performance specifications.*** Any performance specification and any description of a test object or test procedure, for -

(i) Any device used by the Federal Government or any other person pursuant to any aviation or maritime transportation security requirements of Federal law for the detection of any person, and any weapon, explosive, incendiary, or destructive device, item, or substance; and

(ii) Any communications equipment used by the Federal government or any other person in carrying out or complying with any aviation or maritime transportation security requirements of Federal law.

(5) ***Vulnerability assessments.*** Any vulnerability assessment directed, created, held, funded, or approved by the DOT, DHS, or that will be provided to DOT or DHS in support of a Federal security program.

(6) ***Security inspection or investigative information.***

(i) Details of any aviation, maritime, or surface transportation inspection, or any investigation or an alleged violation of aviation, maritime, or surface transportation security requirements of Federal law, that could reveal a security vulnerability, including

the identity of the Federal special agent or other Federal employee who conducted the inspection or investigation, and including any recommendations concerning the inspection or investigation.

(ii) In the case of inspections or investigations performed by TSA, this includes the following information as to events that occurred within 12 months of the date of release of the information: the name of the airport where a violation occurred, the airport identifier in the case number, a description of the violation, the regulation allegedly violated, and the identity of any aircraft operator in connection with specific locations or specific security procedures. Such information will be released after the relevant 12-month period, except that TSA will not release the specific gate or other location on an airport where an event occurred, regardless of the amount of time that has passed since its occurrence. During the period within 12 months of the date of release of the information, TSA may release summaries of an aircraft operator's, but not an airport operator's, total security violations in a specified time range without identifying specific violations or locations. Summaries may include total enforcement actions, total proposed civil penalty amounts, number of cases opened, number of cases referred to TSA or FAA counsel for legal enforcement action, and number of cases closed.

(7) ***Threat information.*** Any information held by the Federal government concerning threats against transportation or transportation systems and sources and methods used to gather or develop threat information, including threats against cyber infrastructure.

(8) ***Security measures.*** Specific details of aviation, maritime, or surface transportation security measures, both operational and technical, whether applied directly by the Federal government or another person, including the following:

(i) Security measures or protocols recommended by the Federal government;

(ii) Information concerning the deployments, numbers, and operations of Coast Guard personnel engaged in maritime security duties and Federal Air Marshals, to the extent it is not classified national security information; and

(iii) Information concerning the deployments and operations of Federal Flight Deck Officers, and numbers of Federal Flight Deck Officers aggregated by aircraft operator.

(iv) Any armed security officer procedures issued by TSA under 49 CFR part 1562.

(9) ***Security screening information.*** The following information regarding security screening under aviation or maritime transportation security requirements of Federal law:

(i) Any procedures, including selection criteria and any comments, instructions, and implementing guidance pertaining thereto, for screening of persons, accessible property, checked baggage, U.S. mail, stores, and cargo, that is conducted by the Federal government or any other authorized person.

(ii) Information and sources of information used by a passenger or property screening program or system, including an automated screening system.

(iii) Detailed information about the locations at which particular screening methods or equipment are used, only if determined by TSA to be SSI.

(iv) Any security screener test and scores of such tests.

(v) Performance or testing data from security equipment or screening systems.

(vi) Any electronic image shown on any screening equipment monitor, including threat images and descriptions of threat images for threat image projection systems.

the identity of the Federal special agent or other Federal employee who conducted the inspection or investigation, and including any recommendations concerning the inspection or investigation.

(ii) In the case of inspections or investigations performed by TSA, this includes the following information as to events that occurred within 12 months of the date of release of the information: the name of the airport where a violation occurred, the airport identifier in the case number, a description of the violation, the regulation allegedly violated, and the identity of any aircraft operator in connection with specific locations or specific security procedures. Such information will be released after the relevant 12-month period, except that TSA will not release the specific gate or other location on an airport where an event occurred, regardless of the amount of time that has passed since its occurrence. During the period within 12 months of the date of release of the information, TSA may release summaries of an aircraft operator's, but not an airport operator's, total security violations in a specified time range without identifying specific violations or locations. Summaries may include total enforcement actions, total proposed civil penalty amounts, number of cases opened, number of cases referred to TSA or FAA counsel for legal enforcement action, and number of cases closed.

(7) ***Threat information.*** Any information held by the Federal government concerning threats against transportation or transportation systems and sources and methods used to gather or develop threat information, including threats against cyber infrastructure.

(8) ***Security measures.*** Specific details of aviation, maritime, or surface transportation security measures, both operational and technical, whether applied directly by the Federal government or another person, including the following:

(i) Security measures or protocols recommended by the Federal government;

(ii) Information concerning the deployments, numbers, and operations of Coast Guard personnel engaged in maritime security duties and Federal Air Marshals, to the extent it is not classified national security information; and

(iii) Information concerning the deployments and operations of Federal Flight Deck Officers, and numbers of Federal Flight Deck Officers aggregated by aircraft operator.

(iv) Any armed security officer procedures issued by TSA under 49 CFR part 1562.

(9) ***Security screening information.*** The following information regarding security screening under aviation or maritime transportation security requirements of Federal law:

(i) Any procedures, including selection criteria and any comments, instructions, and implementing guidance pertaining thereto, for screening of persons, accessible property, checked baggage, U.S. mail, stores, and cargo, that is conducted by the Federal government or any other authorized person.

(ii) Information and sources of information used by a passenger or property screening program or system, including an automated screening system.

(iii) Detailed information about the locations at which particular screening methods or equipment are used, only if determined by TSA to be SSI.

(iv) Any security screener test and scores of such tests.

(v) Performance or testing data from security equipment or screening systems.

(vi) Any electronic image shown on any screening equipment monitor, including threat images and descriptions of threat images for threat image projection systems.

(10) ***Security training materials.*** Records created or obtained for the purpose of training persons employed by, contracted with, or acting for the Federal government or another person to carry out aviation, maritime, or surface transportation security measures required or recommended by DHS or DOT.

(11) ***Identifying information of certain transportation security personnel.***

(i) Lists of the names or other identifying information that identify persons as -

(A) Having unescorted access to a secure area of an airport, a rail secure area, or a secure or restricted area of a maritime facility, port area, or vessel;

(B) Holding a position as a security screener employed by or under contract with the Federal government pursuant to aviation or maritime transportation security requirements of Federal law, where such lists are aggregated by airport;

(C) Holding a position with the Coast Guard responsible for conducting vulnerability assessments, security boardings, or engaged in operations to enforce maritime security requirements or conduct force protection;

(D) Holding a position as a Federal Air Marshal; or

(ii) The name or other identifying information that identifies a person as a current, former, or applicant for Federal Flight Deck Officer.

(12) ***Critical transportation infrastructure asset information.*** Any list identifying systems or assets, whether physical or virtual, so vital to the aviation, maritime, or surface transportation that the incapacity or destruction of such assets would have a debilitating impact on transportation security, if the list is -

(i) Prepared by DHS or DOT; or

(ii) Prepared by a State or local government agency and submitted by the agency to DHS or DOT.

(13) ***Systems security information.*** Any information involving the security of operational or administrative data systems operated by the Federal government that have been identified by the DOT or DHS as critical to aviation or maritime transportation safety or security, including automated information security procedures and systems, security inspections, and vulnerability information concerning those systems.

(14) ***Confidential business information.***

(i) Solicited or unsolicited proposals received by DHS or DOT, and negotiations arising therefrom, to perform work pursuant to a grant, contract, cooperative agreement, or other transaction, but only to the extent that the subject matter of the proposal relates to aviation or maritime transportation security measures;

(ii) Trade secret information, including information required or requested by regulation or Security Directive, obtained by DHS or DOT in carrying out aviation or maritime transportation security responsibilities; and

(iii) Commercial or financial information, including information required or requested by regulation or Security Directive, obtained by DHS or DOT in carrying out aviation or maritime transportation security responsibilities, but only if the source of the information does not customarily disclose it to the public.

(15) ***Research and development.*** Information obtained or developed in the conduct of research related to aviation, maritime, or surface transportation, where such research is approved, accepted, funded, recommended, or directed by DHS or DOT, including research results.

(16) ***Other information.*** Any information not otherwise described in this section that TSA determines is SSI under 49 U.S.C. 114(s) or that the Secretary of DOT determines is SSI under 49 U.S.C. 40119. Upon the request of another Federal agency, TSA or the Secretary of DOT may designate as SSI information not otherwise described in this section.

(c) ***Loss of SSI designation.*** TSA or the Coast Guard may determine in writing that information or records described in paragraph (b) of this section do not constitute SSI because they no longer meet the criteria set forth in paragraph (a) of this section.

[69 FR 28082, May 18, 2004, as amended at 70 FR 41599, July 19, 2005; 71 FR 30507, May 26, 2006; 73 FR 72172, Nov. 26, 2008; 74 FR 47695, Sept. 16, 2009; 85 FR 16499, Mar. 23, 2020]

§ 1520.7 Covered persons.

Persons subject to the requirements of part 1520 are:

(a) Each airport operator, aircraft operator, and fixed base operator subject to the requirements of subchapter C of this chapter, and each armed security officer under subpart B of part 1562.

(b) Each indirect air carrier (IAC), as described in 49 CFR part 1548; and each certified cargo screening facility and its personnel, as described in 49 CFR part 1549.

(c) Each owner, charterer, or operator of a vessel, including foreign vessel owners, charterers, and operators, required to have a security plan under Federal or International law.

(d) Each owner or operator of a maritime facility required to have a security plan under the Maritime Transportation Security Act, (Pub.L. 107-295), 46 U.S.C. 70101 *et seq.*, 33 CFR part 6, or 33 U.S.C. 1221 *et seq.*

(e) Each person performing the function of a computer reservation system or global distribution system for airline passenger information.

(f) Each person participating in a national or area security committee established under 46 U.S.C. 70112, or a port security committee.

(g) Each industry trade association that represents covered persons and has entered into a non-disclosure agreement with the DHS or DOT.

(h) DHS and DOT.

(i) Each person conducting research and development activities that relate to aviation or maritime transportation security and are approved, accepted, funded, recommended, or directed by DHS or DOT.

(j) Each person who has access to SSI, as specified in § 1520.11.

(k) Each person employed by, contracted to, or acting for a covered person, including a grantee of DHS or DOT, and including a person formerly in such position.

(l) Each person for which a vulnerability assessment has been directed, created, held, funded, or approved by the DOT, DHS, or that has prepared a vulnerability assessment that will be provided to DOT or DHS in support of a Federal security program.

(m) Each person receiving SSI under § 1520.15(d) or (e).

(15) ***Research and development.*** Information obtained or developed in the conduct of research related to aviation, maritime, or surface transportation, where such research is approved, accepted, funded, recommended, or directed by DHS or DOT, including research results.

(16) ***Other information.*** Any information not otherwise described in this section that TSA determines is SSI under 49 U.S.C. 114(s) or that the Secretary of DOT determines is SSI under 49 U.S.C. 40119. Upon the request of another Federal agency, TSA or the Secretary of DOT may designate as SSI information not otherwise described in this section.

(c) ***Loss of SSI designation.*** TSA or the Coast Guard may determine in writing that information or records described in paragraph (b) of this section do not constitute SSI because they no longer meet the criteria set forth in paragraph (a) of this section.

[69 FR 28082, May 18, 2004, as amended at 70 FR 41599, July 19, 2005; 71 FR 30507, May 26, 2006; 73 FR 72172, Nov. 26, 2008; 74 FR 47695, Sept. 16, 2009; 85 FR 16499, Mar. 23, 2020]

§ 1520.7 Covered persons.

Persons subject to the requirements of part 1520 are:

(a) Each airport operator, aircraft operator, and fixed base operator subject to the requirements of subchapter C of this chapter, and each armed security officer under subpart B of part 1562.

(b) Each indirect air carrier (IAC), as described in 49 CFR part 1548; and each certified cargo screening facility and its personnel, as described in 49 CFR part 1549.

(c) Each owner, charterer, or operator of a vessel, including foreign vessel owners, charterers, and operators, required to have a security plan under Federal or International law.

(d) Each owner or operator of a maritime facility required to have a security plan under the Maritime Transportation Security Act, (Pub.L. 107-295), 46 U.S.C. 70101 *et seq.*, 33 CFR part 6, or 33 U.S.C. 1221 *et seq.*

(e) Each person performing the function of a computer reservation system or global distribution system for airline passenger information.

(f) Each person participating in a national or area security committee established under 46 U.S.C. 70112, or a port security committee.

(g) Each industry trade association that represents covered persons and has entered into a non-disclosure agreement with the DHS or DOT.

(h) DHS and DOT.

(i) Each person conducting research and development activities that relate to aviation or maritime transportation security and are approved, accepted, funded, recommended, or directed by DHS or DOT.

(j) Each person who has access to SSI, as specified in § 1520.11.

(k) Each person employed by, contracted to, or acting for a covered person, including a grantee of DHS or DOT, and including a person formerly in such position.

(l) Each person for which a vulnerability assessment has been directed, created, held, funded, or approved by the DOT, DHS, or that has prepared a vulnerability assessment that will be provided to DOT or DHS in support of a Federal security program.

(m) Each person receiving SSI under § 1520.15(d) or (e).

(n) Each owner/operator of maritime or surface transportation subject to the requirements of subchapter D of this chapter.

[69 FR 28082, May 18, 2004, as amended at 70 FR 41600, July 19, 2005; 73 FR 72173, Nov. 26, 2008; 74 FR 47695, Sept. 16, 2009; 76 FR 51867, Aug. 18, 2011; 85 FR 16499, Mar. 23, 2020]

§ 1520.9 Restrictions on the disclosure of SSI.

(a) ***Duty to protect information.*** A covered person must -

(1) Take reasonable steps to safeguard SSI in that person's possession or control from unauthorized disclosure. When a person is not in physical possession of SSI, the person must store it a secure container, such as a locked desk or file cabinet or in a locked room.

(2) Disclose, or otherwise provide access to, SSI only to covered persons who have a need to know, unless otherwise authorized in writing by TSA, the Coast Guard, or the Secretary of DOT.

(3) Refer requests by other persons for SSI to TSA or the applicable component or agency within DOT or DHS.

(4) Mark SSI as specified in § 1520.13.

(5) Dispose of SSI as specified in § 1520.19.

(b) ***Unmarked SSI.*** If a covered person receives a record containing SSI that is not marked as specified in § 1520.13, the covered person must -

(1) Mark the record as specified in § 1520.13; and

(2) Inform the sender of the record that the record must be marked as specified in § 1520.13.

(c) ***Duty to report unauthorized disclosure.*** When a covered person becomes aware that SSI has been released to unauthorized persons, the covered person must promptly inform TSA or the applicable DOT or DHS component or agency.

(d) ***Additional Requirements for Critical Infrastructure Information.*** In the case of information that is both SSI and has been designated as critical infrastructure information under section 214 of the Homeland Security Act, any covered person who is a Federal employee in possession of such information must comply with the disclosure restrictions and other requirements applicable to such information under section 214 and any implementing regulations.

§ 1520.11 Persons with a need to know.

(a) ***In general.*** A person has a need to know SSI in each of the following circumstances:

(1) When the person requires access to specific SSI to carry out transportation security activities approved, accepted, funded, recommended, or directed by DHS or DOT.

(2) When the person is in training to carry out transportation security activities approved, accepted, funded, recommended, or directed by DHS or DOT.

(3) When the information is necessary for the person to supervise or otherwise manage individuals carrying out transportation security activities approved, accepted, funded, recommended, or directed by the DHS or DOT.

(4) When the person needs the information to provide technical or legal advice to a covered person regarding transportation security requirements of Federal law.

(5) When the person needs the information to represent a covered person in connection with any judicial or administrative proceeding regarding those requirements.

(b) ***Federal, State, local, or tribal government employees, contractors, and grantees.***

(1) A Federal, State, local, or tribal government employee has a need to know SSI if access to the information is necessary for performance of the employee's official duties, on behalf or in defense of the interests of the Federal, State, local, or tribal government.

(2) A person acting in the performance of a contract with or grant from a Federal, State, local, or tribal government agency has a need to know SSI if access to the information is necessary to performance of the contract or grant.

(c) ***Background check.*** TSA or Coast Guard may make an individual's access to the SSI contingent upon satisfactory completion of a security background check or other procedures and requirements for safeguarding SSI that are satisfactory to TSA or the Coast Guard.

(d) ***Need to know further limited by the DHS or DOT.*** For some specific SSI, DHS or DOT may make a finding that only specific persons or classes of persons have a need to know.

[69 FR 28082, May 18, 2004, as amended at 70 FR 1382, Jan. 7, 2005; 73 FR 72173, Nov. 26, 2008]

§ 1520.13 Marking SSI.

(a) ***Marking of paper records.*** In the case of paper records containing SSI, a covered person must mark the record by placing the protective marking conspicuously on the top, and the distribution limitation statement on the bottom, of -

(1) The outside of any front and back cover, including a binder cover or folder, if the document has a front and back cover;

(2) Any title page; and

(3) Each page of the document.

(b) ***Protective marking.*** The protective marking is: SENSITIVE SECURITY INFORMATION.

(c) ***Distribution limitation statement.*** The distribution limitation statement is:

WARNING: This record contains Sensitive Security Information that is controlled under 49 CFR parts 15 and 1520. No part of this record may be disclosed to persons without a "need to know", as defined in 49 CFR parts 15 and 1520, except with the written permission of the Administrator of the Transportation Security Administration or the Secretary of Transportation. Unauthorized release may result in civil penalty or other action. For U.S. government agencies, public disclosure is governed by 5 U.S.C. 552 and 49 CFR parts 15 and 1520.

(d) ***Other types of records.*** In the case of non-paper records that contain SSI, including motion picture films, videotape recordings, audio recording, and electronic and magnetic records, a covered person must clearly and conspicuously mark the records with the protective marking and the distribution limitation statement such that the viewer or listener is reasonably likely to see or hear them when obtaining access to the contents of the record.

§ 1520.15 SSI disclosed by TSA or the Coast Guard.

(5) When the person needs the information to represent a covered person in connection with any judicial or administrative proceeding regarding those requirements.

(b) ***Federal, State, local, or tribal government employees, contractors, and grantees.***

(1) A Federal, State, local, or tribal government employee has a need to know SSI if access to the information is necessary for performance of the employees official duties, on behalf or in defense of the interests of the Federal, State, local, or tribal government.

(2) A person acting in the performance of a contract with or grant from a Federal, State, local, or tribal government agency has a need to know SSI if access to the information is necessary to performance of the contract or grant.

(c) ***Background check.*** TSA or Coast Guard may make an individual's access to the SSI contingent upon satisfactory completion of a security background check or other procedures and requirements for safeguarding SSI that are satisfactory to TSA or the Coast Guard.

(d) ***Need to know further limited by the DHS or DOT.*** For some specific SSI, DHS or DOT may make a finding that only specific persons or classes of persons have a need to know.

[69 FR 28082, May 18, 2004, as amended at 70 FR 1382, Jan. 7, 2005; 73 FR 72173, Nov. 26, 2008]

§ 1520.13 Marking SSI.

(a) ***Marking of paper records.*** In the case of paper records containing SSI, a covered person must mark the record by placing the protective marking conspicuously on the top, and the distribution limitation statement on the bottom, of -

(1) The outside of any front and back cover, including a binder cover or folder, if the document has a front and back cover;

(2) Any title page; and

(3) Each page of the document.

(b) ***Protective marking.*** The protective marking is: SENSITIVE SECURITY INFORMATION.

(c) ***Distribution limitation statement.*** The distribution limitation statement is:

WARNING: This record contains Sensitive Security Information that is controlled under 49 CFR parts 15 and 1520. No part of this record may be disclosed to persons without a "need to know", as defined in 49 CFR parts 15 and 1520, except with the written permission of the Administrator of the Transportation Security Administration or the Secretary of Transportation. Unauthorized release may result in civil penalty or other action. For U.S. government agencies, public disclosure is governed by 5 U.S.C. 552 and 49 CFR parts 15 and 1520.

(d) ***Other types of records.*** In the case of non-paper records that contain SSI, including motion picture films, videotape recordings, audio recording, and electronic and magnetic records, a covered person must clearly and conspicuously mark the records with the protective marking and the distribution limitation statement such that the viewer or listener is reasonably likely to see or hear them when obtaining access to the contents of the record.

§ 1520.15 SSI disclosed by TSA or the Coast Guard.

(a) ***In general.*** Except as otherwise provided in this section, and notwithstanding the Freedom of Information Act (5 U.S.C. 552), the Privacy Act (5 U.S.C. 552a), and other laws, records containing SSI are not available for public inspection or copying, nor does TSA or the Coast Guard release such records to persons without a need to know.

(b) ***Disclosure under the Freedom of Information Act and the Privacy Act.*** If a record contains both SSI and information that is not SSI, TSA or the Coast Guard, on a proper Freedom of Information Act or Privacy Act request, may disclose the record with the SSI redacted, provided the record is not otherwise exempt from disclosure under the Freedom of Information Act or Privacy Act.

(c) ***Disclosures to committees of Congress and the General Accounting Office.*** Nothing in this part precludes TSA or the Coast Guard from disclosing SSI to a committee of Congress authorized to have the information or to the Comptroller General, or to any authorized representative of the Comptroller General.

(d) ***Disclosure in enforcement proceedings -***

(1) ***In general.*** TSA or the Coast Guard may provide SSI to a person in the context of an administrative enforcement proceeding when, in the sole discretion of TSA or the Coast Guard, as appropriate, access to the SSI is necessary for the person to prepare a response to allegations contained in a legal enforcement action document issued by TSA or the Coast Guard.

(2) ***Security background check.*** Prior to providing SSI to a person under paragraph (d)(1) of this section, TSA or the Coast Guard may require the individual or, in the case of an entity, the individuals representing the entity, and their counsel, to undergo and satisfy, in the judgment of TSA or the Coast Guard, a security background check.

(e) ***Other conditional disclosure.*** TSA may authorize a conditional disclosure of specific records or information that constitute SSI upon the written determination by TSA that disclosure of such records or information, subject to such limitations and restrictions as TSA may prescribe, would not be detrimental to transportation security.

(f) ***Obligation to protect information.*** When an individual receives SSI pursuant to paragraph (d) or (e) of this section that individual becomes a covered person under § 1520.7 and is subject to the obligations of a covered person under this part.

(g) ***No release under FOIA.*** When TSA discloses SSI pursuant to paragraphs (b) through (e) of this section, TSA makes the disclosure for the sole purpose described in that paragraph. Such disclosure is not a public release of information under the Freedom of Information Act.

(h) ***Disclosure of Critical Infrastructure Information.*** Disclosure of information that is both SSI and has been designated as critical infrastructure information under section 214 of the Homeland Security Act is governed solely by the requirements of section 214 and any implementing regulations.

§ 1520.17 Consequences of unauthorized disclosure of SSI.

Violation of this part is grounds for a civil penalty and other enforcement or corrective action by DHS, and appropriate personnel actions for Federal employees. Corrective action may include issuance of an order requiring retrieval of SSI to remedy unauthorized disclosure or an order to cease future unauthorized disclosure.

§ 1520.19 Destruction of SSI.

(a) ***DHS.*** Subject to the requirements of the Federal Records Act (5 U.S.C. 105), including the duty to preserve records containing documentation of a Federal agency's policies, decisions, and essential transactions, DHS destroys SSI when no longer needed to carry out the agency's function.

(b) ***Other covered persons*** -

(1) ***In general.*** A covered person must destroy SSI completely to preclude recognition or reconstruction of the information when the covered person no longer needs the SSI to carry out transportation security measures.

(2) ***Exception.*** Paragraph (b)(1) of this section does not require a State or local government agency to destroy information that the agency is required to preserve under State or local law.

(a) ***DHS.*** Subject to the requirements of the Federal Records Act (5 U.S.C. 105), including the duty to preserve records containing documentation of a Federal agency's policies, decisions, and essential transactions, DHS destroys SSI when no longer needed to carry out the agency's function.

(b) ***Other covered persons*** -

(1) ***In general.*** A covered person must destroy SSI completely to preclude recognition or reconstruction of the information when the covered person no longer needs the SSI to carry out transportation security measures.

(2) ***Exception.*** Paragraph (b)(1) of this section does not require a State or local government agency to destroy information that the agency is required to preserve under State or local law.

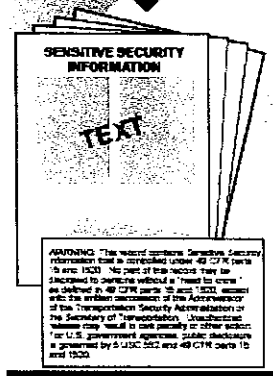
Sensitive Security Information – Best Practices Guide for Non-DHS Employees and Contractors

www.tsa.gov

Sensitive Security Information

Best Practices Guide for Non-DHS Employees and Contractors

The purpose of this hand-out is to provide *transportation security stakeholders and non-DHS government employees and contractors* with best practices for handling SSI. Best practices are not to be construed as legally binding requirements of, or official implementing guidance for, the SSI regulation.



What is SSI?

Sensitive Security Information (SSI) is information that, if publicly released, would be *detrimental to transportation security*, as defined by Federal regulation 49 C.F.R. part 1520.

Although SSI is not classified information, there are specific procedures for recognizing, marking, protecting, safely sharing, and destroying SSI. As persons receiving SSI in order to carry out responsibilities related to transportation security, you are considered "covered persons" under the SSI regulation and have special obligations to protect this information from unauthorized disclosure.

SSI Requirements

The SSI regulation mandates specific and general requirements for handling and protecting SSI.

You Must – Lock Up All SSI: Store SSI in a secure container such as a locked file cabinet or drawer (as defined by Federal regulation 49 C.F.R. part 1520.9 (a)(1)).

You Must – When No Longer Needed, Destroy SSI: Destruction of SSI must be complete to preclude recognition or reconstruction of the information (as defined by Federal regulation 49 C.F.R. part 1520.19).

You Must – Mark SSI: The regulation requires that even when only a small portion of a paper document contains SSI, every page of the document must be marked with the SSI header and footer shown at left (as defined by Federal regulation 49 C.F.R. part 1520.13). Alteration of the footer is not authorized.

Best Practices Guide

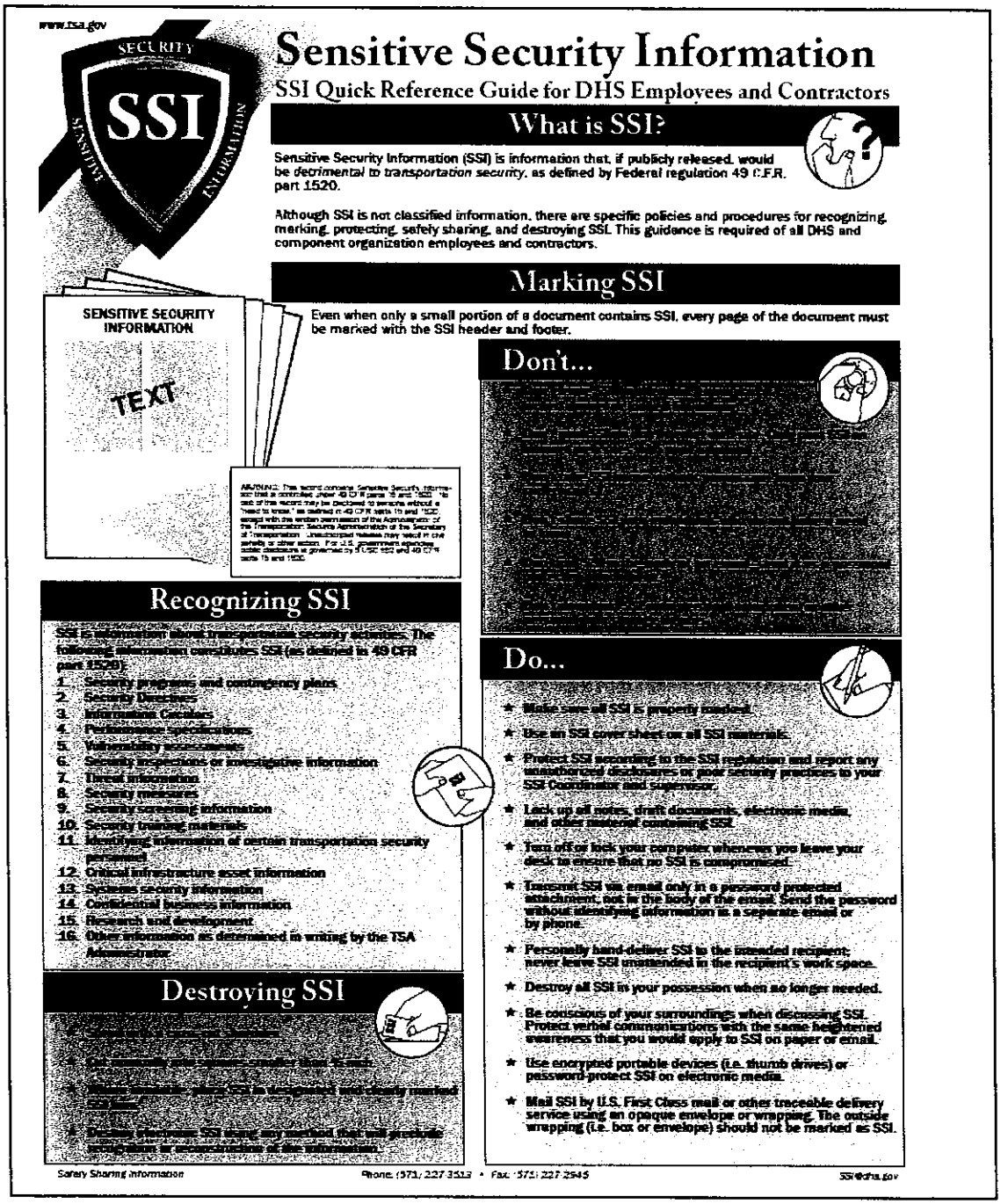
Reasonable steps must be taken to safeguard SSI. While the regulations does not define reasonable steps, the TSA SSI Branch offers these best practices as examples of reasonable steps:

- Use an SSI cover sheet on all SSI materials.
- Electronic presentations (e.g., PowerPoint) should be marked with the SSI header on all pages and the SSI footer on the first and last pages of the presentation.
- Spreadsheets should be marked with the SSI header on every page and the SSI footer on every page or at the end of the document.
- Video and audio should be marked with the SSI header and footer on the protective cover when able and the header and footer should be shown and/or read at the beginning and end of the program.
- CDs/DVDs should be encrypted or password-protected and the header and footer should be affixed to the CD/DVD.
- Portable drives, including "flash" or "thumb" drives should not themselves be marked, but the drive itself should be encrypted or all SSI documents stored on it should be password protected.
- When leaving your computer or desk you must lock up all SSI and you should lock or turn off your computer.
- Taking SSI home is not recommended. If necessary, get permission from a supervisor and lock up all SSI at home.
- Don't handle SSI on computers that have peer-to-peer software installed on them or on your home computer.
- Transmit SSI via email only in a password protected attachment, not in the body of the email. Send the password without identifying information in a separate email or by phone.
- Passwords for SSI documents should contain at least eight characters, have at least one uppercase and one lowercase letter, contain at least one number, one special character and not be a word in the dictionary.
- Faxing of SSI should be done by first verifying the fax number and that the intended recipient will be available promptly to retrieve the SSI.
- SSI should be mailed by U.S. First Class mail or other traceable delivery service using an opaque envelope or wrapping. The outside wrapping (i.e. box or envelope) should not be marked as SSI.
- Interoffice mail should be sent using an unmarked, opaque, sealed envelope so that the SSI cannot be read through the envelope.
- SSI stored in network folders should either require a password to open or the network should limit access to the folder to only those with a need to know.
- Properly destroy SSI using a cross-cut shredder or by cutting manually into less than ½ inch squares.
- Properly destroy electronic records using any method that will preclude recognition or reconstruction.

Phone: (571) 227-3513 • Fax: (571) 227-2945

Safely Sharing Information
SSI@dhs.gov

Sensitive Security Information – SSI Quick Reference Guide for DHS Employees and Contractors



www.tsa.gov

Sensitive Security Information

SSI Quick Reference Guide for DHS Employees and Contractors

What is SSI?

Sensitive Security Information (SSI) is information that, if publicly released, would be *detrimental to transportation security*, as defined by Federal regulation 49 C.F.R. part 1520.

Although SSI is not classified information, there are specific policies and procedures for recognizing, marking, protecting, safely sharing, and destroying SSI. This guidance is required of all DHS and component organization employees and contractors.

Marking SSI

Even when only a small portion of a document contains SSI, every page of the document must be marked with the SSI header and footer.

SENSITIVE SECURITY INFORMATION

TEXT

Don't...

Recognizing SSI

SSI is information about transportation security activities. The following information constitutes SSI (as defined in 49 CFR part 1520):

1. Security programs and contingency plans
2. Security Directives
3. Information Circulars
4. Performance specifications
5. Vulnerability assessments
6. Security inspections or investigative information
7. Threat information
8. Security measures
9. Security screening information
10. Security training materials
11. Identifying information of certain transportation security personnel
12. Critical infrastructure asset information
13. Systems security information
14. Confidential business information
15. Research and development
16. Other information as determined in writing by the TSA Administrator

Do...

- ★ Make sure all SSI is properly marked.
- ★ Use an SSI cover sheet on all SSI materials.
- ★ Protect SSI according to the SSI regulation and report any unauthorized disclosures or poor security practices to your SSI Coordinator and supervisor.
- ★ Lock up all notes, draft documents, electronic media, and other material containing SSI.
- ★ Turn off or lock your computer whenever you leave your desk to ensure that no SSI is compromised.
- ★ Transmit SSI via email only in a password protected attachment, not in the body of the email. Send the password without identifying information in a separate email or by phone.
- ★ Personally hand-deliver SSI to the intended recipient; never leave SSI unattended in the recipient's work space.
- ★ Destroy all SSI in your possession when no longer needed.
- ★ Be conscious of your surroundings when discussing SSI. Protect verbal communications with the same heightened awareness that you would apply to SSI on paper or email.
- ★ Use encrypted portable devices (i.e. thumb drives) or password-protect SSI on electronic media.
- ★ Mail SSI by U.S. First Class mail or other traceable delivery service using an opaque envelope or wrapping. The outside wrapping (i.e. box or envelope) should not be marked as SSI.

Destroying SSI

Safely Sharing Information

Phone: (571) 227-3513 • Fax: (571) 227-2945

SSI@dhs.gov

DHS Form 11000-6 (08-04) – Department of Homeland Security Non- Disclosure Agreement

DEPARTMENT OF HOMELAND SECURITY

NON-DISCLOSURE AGREEMENT

1. _____, an individual official, employee, consultant, or subcontractor of or to _____ (the Authorized Entity), intending to be legally bound, hereby consent to the terms in this Agreement in consideration of my being granted conditional access to certain information, specified below, that is owned by, produced by, or in the possession of the United States Government.

(Signer will acknowledge the category or categories of information that he or she may have access to, and the signer's willingness to comply with the standards for protection by placing his or her initials in front of the applicable category or categories.)

Initials:	**Protected Critical Infrastructure Information (PCII)**

I attest that I am familiar with, and I will comply with all requirements of the PCII program set out in the Critical Infrastructure Information Act of 2002 (CII Act) (Title II, Subtitle B, of the Homeland Security Act of 2002, Public Law 107-296, 196 Stat. 2135, 6 USC 101 et seq.), as amended, the implementing regulations thereto (6 CFR Part 29), as amended, and the applicable PCII Procedures Manual, as amended, and with any such requirements that may be officially communicated to me by the PCII Program Manager or the PCII Program Manager's designee.

Initials:	**Sensitive Security Information (SSI)**

I attest that I am familiar with, and I will comply with the standards for access, dissemination, handling, and safeguarding of SSI information as cited in this Agreement and in accordance with 49 CFR Part 1520, "Protection of Sensitive Security Information," "Policies and Procedures for Safeguarding and Control of SSI," as amended, and any supplementary guidance issued by an authorized official of the Department of Homeland Security.

Initials:	**Other Sensitive but Unclassified (SBU)**

As used in this Agreement, sensitive but unclassified information is an over-arching term that covers any information, not otherwise indicated above, which the loss of, misuse of, or unauthorized access to or modification of could adversely affect the national interest or the conduct of Federal programs, or the privacy to which individuals are entitled under Section 552a of Title 5, as amended, but which has not been specifically authorized under criteria established by an Executive Order or an Act of Congress to be kept secret in the interest of national defense or foreign policy. This includes information categorized by DHS or other government agencies as: For Official Use Only (FOUO); Official Use Only (OUO); Sensitive Homeland Security Information (SHSI); Limited Official Use (LOU); Law Enforcement Sensitive (LES); Safeguarding Information (SGI); Unclassified Controlled Nuclear Information (UCNI); and any other identifier used by other government agencies to categorize information as sensitive but unclassified.

I attest that I am familiar with, and I will comply with the standards for access, dissemination, handling, and safeguarding of the information to which I am granted access as cited in this Agreement and in accordance with the guidance provided to me relative to the specific category of information.

I understand and agree to the following terms and conditions of my access to the information indicated above:

1. I hereby acknowledge that I have received a security indoctrination concerning the nature and protection of information to which I have been provided conditional access, including the procedures to be followed in ascertaining whether other persons to whom I contemplate disclosing this information have been approved for access to it, and that I understand these procedures.

2. By being granted conditional access to the information indicated above, the United States Government has placed special confidence and trust in me and I am obligated to protect this information from unauthorized disclosure, in accordance with the terms of this Agreement and the laws, regulations, and directives applicable to the specific categories of information to which I am granted access.

3. I attest that I understand my responsibilities and that I am familiar with and will comply with the standards for protecting such information that I may have access to in accordance with the terms of this Agreement and the laws, regulations, and/or directives applicable to the specific categories of information to which I am granted access. I understand that the United States Government may conduct inspections, at any time or place, for the purpose of ensuring compliance with the conditions for access, dissemination, handling and safeguarding information under this Agreement.

DHS Form 11000-6 (08-04) Page 1

DHS Form 11000-6 (08-04) – Department of Homeland Security Non- Disclosure Agreement

DEPARTMENT OF HOMELAND SECURITY

NON-DISCLOSURE AGREEMENT

I, _____, an individual official, employee, consultant, or subcontractor of or to _____ (the Authorized Entity), intending to be legally bound, hereby consent to the terms in this Agreement in consideration of my being granted conditional access to certain information, specified below, that is owned by, produced by, or in the possession of the United States Government.

(Signer will acknowledge the category or categories of information that he or she may have access to, and the signer's willingness to comply with the standards for protection by placing his or her initials in front of the applicable category or categories.)

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Initials:	**Sensitive Security Information (SSI)**

I attest that I am familiar with, and I will comply with the standards for access, dissemination, handling, and safeguarding of SSI information as cited in this Agreement and in accordance with 49 CFR Part 1520, "Protection of Sensitive Security Information," "Policies and Procedures for Safeguarding and Control of SSI," as amended, and any supplementary guidance issued by an authorized official of the Department of Homeland Security.

Initials:	**Other Sensitive but Unclassified (SBU)**

As used in this Agreement, sensitive but unclassified information is an over-arching term that covers any information, not otherwise indicated above, which the loss of, misuse of, or unauthorized access to or modification of could adversely affect the national interest or the conduct of Federal programs, or the privacy to which individuals are entitled under Section 552a of Title 5, as amended, but which has not been specifically authorized under criteria established by an Executive Order or an Act of Congress to be kept secret in the interest of national defense or foreign policy. This includes information categorized by DHS or other government agencies as: For Official Use Only (FOUO); Official Use Only (OUO); Sensitive Homeland Security Information (SHSI); Limited Official Use (LOU); Law Enforcement Sensitive (LES); Safeguarding Information (SGI); Unclassified Controlled Nuclear Information (UCNI); and any other identifier used by other government agencies to categorize information as sensitive but unclassified.

I attest that I am familiar with, and I will comply with the standards for access, dissemination, handling, and safeguarding of the information to which I am granted access as cited in this Agreement and in accordance with the guidance provided to me relative to the specific category of information.

I understand and agree to the following terms and conditions of my access to the information indicated above:

1. I hereby acknowledge that I have received a security indoctrination concerning the nature and protection of information to which I have been provided conditional access, including the procedures to be followed in ascertaining whether other persons to whom I contemplate disclosing this information have been approved for access to it, and that I understand these procedures.

2. By being granted conditional access to the information indicated above, the United States Government has placed special confidence and trust in me and I am obligated to protect this information from unauthorized disclosure, in accordance with the terms of this Agreement and the laws, regulations, and directives applicable to the specific categories of information to which I am granted access.

3. I attest that I understand my responsibilities and that I am familiar with and will comply with the standards for protecting such information that I may have access to in accordance with the terms of this Agreement and the laws, regulations, and/or directives applicable to the specific categories of information to which I am granted access. I understand that the United States Government may conduct inspections, at any time or place, for the purpose of ensuring compliance with the conditions for access, dissemination, handling and safeguarding information under this Agreement.

DHS Form 11000-6 (08-04) Page 1

4. I will not disclose or release any information provided to me pursuant to this Agreement without proper authority or authorization. Should situations arise that warrant the disclosure or release of such information I will do so only under approved circumstances and in accordance with the laws, regulations, or directives applicable to the specific categories of information. I will honor and comply with any and all dissemination restrictions cited or verbally relayed to me by the proper authority.

5. (a) For PCII - (1) Upon the completion of my engagement as an employee, consultant, or subcontractor under the contract, or the completion of my work on the PCII Program, whichever occurs first, I will surrender promptly to the PCII Program Manager or his designee, or to the appropriate PCII officer, PCII of any type whatsoever that is in my possession.
(2) If the Authorized Entity is a United States Government contractor performing services in support of the PCII Program, I will not request, obtain, maintain, or use PCII unless the PCII Program Manager or Program Manager's designee has first made in writing, with respect to the contractor, the certification as provided for in Section 29.8(c) of the implementing regulations to the CII Act, as amended.
(b) For SSI and SBU - I hereby agree that material which I have in my possession and containing information covered by this Agreement, will be handled and safeguarded in a manner that affords sufficient protection to prevent the unauthorized disclosure of or inadvertent access to such information, consistent with the laws, regulations, or directives applicable to the specific categories of information. I agree that I shall return all information to which I have had access or which is in my possession 1) upon demand by an authorized individual; and/or 2) upon the conclusion of my duties, association, or support to DHS; and/or 3) upon the determination that my official duties do not require further access to such information.

6. I hereby agree that I will not alter or remove markings, which indicate a category of information or require specific handling instructions, from any material I may come in contact with, in the case of SSI or SBU, unless such alteration or removal is consistent with the requirements set forth in the laws, regulations, or directives applicable to the specific category of information or, in the case of PCII, unless such alteration or removal is authorized by the PCII Program Manager or the PCII Program Manager's designee. I agree that if I use information from a sensitive document or other medium, I will carry forward any markings or other required restrictions to derivative products, and will protect them in the same matter as the original.

7. I hereby agree that I shall promptly report to the appropriate official, in accordance with the guidance issued for the applicable category of information, any loss, theft, misuse, misplacement, unauthorized disclosure, or other security violation. I have knowledge of and whether or not I am personally involved. I also understand that my anonymity will be kept to the extent possible when reporting security violations.

8. If I violate the terms and conditions of this Agreement, such violation may result in the cancellation of my conditional access to the information covered by this Agreement. This may serve as a basis for denying me conditional access to other types of information, to include classified national security information.

9. (a) With respect to SSI and SBU, I hereby assign to the United States Government all royalties, remunerations, and emoluments that have resulted, will result, or may result from any disclosure, publication, or revelation of the information not consistent with the terms of this Agreement.
(b) With respect to PCII I hereby assign to the entity owning the PCII and the United States Government, all royalties, remunerations, and emoluments that have resulted, will result, or may result from any disclosure, publication, or revelation of PCII not consistent with the terms of this Agreement.

10. This Agreement is made and intended for the benefit of the United States Government and may be enforced by the United States Government or the Authorized Entity. By granting me conditional access to information in this context, the United States Government and, with respect to PCII, the Authorized Entity, may seek any remedy available to it to enforce this Agreement including, but not limited to, application for a court order prohibiting disclosure of information in breach of this Agreement. I understand that if I violate the terms and conditions of this Agreement, I could be subjected to administrative, disciplinary, civil, or criminal action, as appropriate, under the laws, regulations, or directives applicable to the category of information involved and neither the United States Government nor the Authorized Entity have waived any statutory or common law evidentiary privileges or protections that they may assert in any administrative or court proceeding to protect any sensitive information to which I have been given conditional access under the terms of this Agreement.

11. Unless and until I am released in writing by an authorized representative of the Department of Homeland Security (if permissible for the particular category of information), I understand that all conditions and obligations imposed upon me by this Agreement apply during the time that I am granted conditional access, and at all times thereafter.

12. Each provision of this Agreement is severable. If a court should find any provision of this Agreement to be unenforceable, all other provisions shall remain in full force and effect.

13. My execution of this Agreement shall not nullify or affect in any manner any other secrecy or non-disclosure Agreement which I have executed or may execute with the United States Government or any of its departments or agencies.

14. These restrictions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by Executive Order No. 12958, as amended; Section 7211 of Title 5, United States Code (governing disclosures to Congress); Section 1034 of Title 10, United States Code, as amended by the Military Whistleblower Protection Act (governing disclosure to Congress by members of the military); Section 2302(b)(8) of Title 5, United States Code, as amended by the Whistleblower Protection Act (governing disclosures of illegality, waste, fraud, abuse or public health or safety threats); the Intelligence Identities Protection Act of 1982 (50 USC 421 et seq.) (governing disclosures that could expose confidential Government agents); and the statutes which protect against disclosure that may compromise the national security, including Sections 641, 793, 794, 798, and 952 of Title 18, United States Code, and Section 4(b) of the Subversive Activities Act of 1950 (50 USC 783(b)). The definitions, requirements, obligations, rights, sanctions, and liabilities created by said Executive Order and listed statutes are incorporated into this agreement and are controlling.

15. Signing this Agreement does not bar disclosures to Congress or to an authorized official of an executive agency or the Department of Justice that are essential to reporting a substantial violation of law.

16. I represent and warrant that I have the authority to enter into this Agreement.

17. I have read this Agreement carefully and my questions, if any, have been answered. I acknowledge that the briefing officer has made available to me any laws, regulations, or directives referenced in this document so that I may read them at this time, if I so choose.

DEPARTMENT OF HOMELAND SECURITY
NON-DISCLOSURE AGREEMENT
Acknowledgement

Typed/Printed Name:	Government/Department/Agency/Business Address	Telephone Number:

I make this Agreement in good faith, without mental reservation or purpose of evasion.

Signature:

WITNESS:

Typed/Printed Name:	Government/Department/Agency/Business Address	Telephone Number:

Signature:

This form is not subject to the requirements of P.L. 104-13, "Paperwork Reduction Act of 1995" 44 USC, Chapter 35.

END OF ATTACHMENT SECTION

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END OF ATTACHMENT SECTION

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SECTION 01 11 00 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 PROJECT DESCRIPTION

A. Project/Work Identification:

1. The General overall description of the Work of the Contract for the:

   BP-S195, TERM C, PH-1X-AIRSIDE CONCOURSE
   Orlando International Airport
   Orlando, Florida

   can be summarized for purposes of administration and payment in the manner of project segments as follows:

2. The Project consists of a 4 gate Airside Concourse building with some adjacent airfield civil components along a line of demarcation as shown in the drawings using some previously constructed/fabricated components.
3. The Project shall be seeking LEED v4 BD+C certification.

1.3 CONTRACTOR USE OF PREMISES

A. Limit use of the premises to construction activities within areas indicated; allow for any Owner and tenant occupancy, and use by the public.

1. Minimize any disruption to all operating areas, including parking areas.

   a. Existing public services and utility systems shall remain in operation during the construction period, excluding times required for installation of new work unless specifically allowed by the Contract.
   b. Schedule and coordinate outages and interruptions of public service with the OAR. See the specific forms for processes and time constraints. Utilize the following forms:

      1) Form #018 System Interruption/Utility Outage Notification.
      2) Form #018a System Interruption/Utility Outage Notification Procedured.
      3) Form #018b Roofing Impact Notification
      4) Form #018c Security System Interruption/Outage Request

2. Provide all temporary directional signage, safety, and barricading required for passenger services.

SECTION 01 11 00 - SUMMARY OF WORK

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      2) Form #018a System Interruption/Utility Outage Notification Procedured.
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      4) Form #018c Security System Interruption/Outage Request

2. Provide all temporary directional signage, safety, and barricading required for passenger services.

a. Submit a plan indicating signage, safety, and barricading for access routes, storage areas and work sites, at the pre-construction meeting.
b. Directional signing at the access gate and or along the delivery route to the storage area or work site shall be as directed by the OAR.

3. Confine operations to areas within Contract limits indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed.
4. Access to site shall be shown on the plans or as directed by the OAR. Do not permit any unauthorized construction personnel or traffic on the site. Provide for traffic control to and from the various construction areas. Immediately clean-up any debris deposited along the access road as a result of construction traffic.

   a. Keep driveways and entrances serving the premises clear and available to the Owner, Tenant, their employees at all times, and the public. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.

5. All material orders for delivery to the site will use as a delivery address the access point at the Contractor's storage site.

   a. Coordinate with the OAR and allow for the least possible disruption of the facilities normal operations for delivery of materials and removal of demolished and discarded materials.
   b. Delivery of materials and removal of demolished and discarded materials shall be scheduled as follows:

      1) Schedule and coordinate all deliveries and removal of debris between the hours of 10:00 PM and 6:00 AM each day of the work week.

6. The limits of construction material storage areas, equipment storage areas, and parking areas shall be as indicated in the documents or as directed by the OAR. Erect and maintain suitable fencing, marking and warning devices suitable for both day/night use to delineate the perimeter of all such areas. Refer to specification Section 01 55 30 Requirements for Use of Canal Road.

   a. Parking management cards may be used to provide contractor parking in the terminal garages and terminal top parking. These cards will cost $60 per card per month, taxes not included.

B. Use of the Existing Building: Maintain the existing building in a weathertight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.

1.4 OWNER OCCUPANCY

A. Full Owner Occupancy: The Owner, its tenants, and the public will occupy the site and existing building and adjacent facilities (outside the limits of the construction area unless specified) during the entire construction period. Cooperate with the Owner during construction operations to minimize conflicts, facilitate occupancy usage, and protect persons and property in the project area during the entire construction period. Perform the Work so as not to interfere with the Owner's operations.

1. All work may be carried out without time restrictions, unless otherwise directed by the Owner.
2. ~~Unless otherwise directed by the Owner, work shall be scheduled between the hours of 7:00 AM until 6:00 PM each day.~~

1.5 LAWS, PERMITS, AND REGULATIONS

A. Comply with all applicable laws, ordinances, regulations, codes, ADA requirements.

B. Obtain and pay for all license and permits, all fees and charges for connection to outside services and parking for Contractor's vehicles.

C. Abide by FAA and Owner's safety and security regulations and procedures relative to access to, and work in, Airport Operations Areas and secured facilities.

D. Comply with Owner's insurance requirements.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 11 00

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C. Abide by FAA and Owner's safety and security regulations and procedures relative to access to, and work in, Airport Operations Areas and secured facilities.

D. Comply with Owner's insurance requirements.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 11 00

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SECTION 01 25 00 – SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for handling requests for substitutions made after the Project is advertised.

B. Procedural requirements governing the Contractor's selection of products and product options are included under Section "Materials and Equipment."

1.3 DEFINITIONS

A. Definitions used in this Section are not intended to change or modify the meaning of other terms used in the Contract Documents.

B. Substitutions: Requests for Substitution are changes proposed by the Contractor in products, materials, equipment, and methods of construction required by Contract Documents.

1. The following are not considered Substitutions:

   a. Revisions to Contract Documents requested by the Owner or Designer.
   b. Specified options of products and construction methods included in Contract Documents.
   c. Revisions required for the Contractor to comply with governing regulations and orders issued by governing authorities.

C. Substitutions requested by Bidders during the bidding period are subject to the requirements specified in this Section for substitutions. The Owner's decision on the Request for Substitution during bidding will only be made by means of a Bid Addendum.

1.4 SUBMITTALS

A. Substitution Request Submittal: Requests for substitution during bidding may be considered if submitted as directed in the Instructions to Bidders at least fourteen (14) days before Bid date. Requests received after this time may be rejected at the discretion of the Owner. Request for substitution received after Contract award must be made to the OAR. The OAR will render a decision on such a Request for Substitution within thirty (30) days after the complete Request for Substitution has been received by the OAR.

SECTION 01 25 00 – SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for handling requests for substitutions made after the Project is advertised.

B. Procedural requirements governing the Contractor's selection of products and product options are included under Section "Materials and Equipment."

1.3 DEFINITIONS

A. Definitions used in this Section are not intended to change or modify the meaning of other terms used in the Contract Documents.

B. Substitutions: Requests for Substitution are changes proposed by the Contractor in products, materials, equipment, and methods of construction required by Contract Documents.

1. The following are not considered Substitutions:

   a. Revisions to Contract Documents requested by the Owner or Designer.
   b. Specified options of products and construction methods included in Contract Documents.
   c. Revisions required for the Contractor to comply with governing regulations and orders issued by governing authorities.

C. Substitutions requested by Bidders during the bidding period are subject to the requirements specified in this Section for substitutions. The Owner's decision on the Request for Substitution during bidding will only be made by means of a Bid Addendum.

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A. Substitution Request Submittal: Requests for substitution during bidding may be considered if submitted as directed in the Instructions to Bidders at least fourteen (14) days before Bid date. Requests received after this time may be rejected at the discretion of the Owner. Request for substitution received after Contract award must be made to the OAR. The OAR will render a decision on such a Request for Substitution within thirty (30) days after the complete Request for Substitution has been received by the OAR.

B. Each Request for Substitution (whether during bidding or after Contract award) must be submitted as follows: Submit four (4) copies of each request for substitution for consideration. Submit requests in the form and in accordance with procedures required for Change Order proposals in the General Conditions. Substitution Request Form: Use "Contractor's Request For Substitution" form (3 pages) provided at end of this Section.

1. Identify the product, or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:

   a. Product Data, including Drawings and descriptions of products, fabrication and installation procedures.
   b. Samples, where applicable or requested.
   c. A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements such as size, weight, durability, code compliance, maintenance requirements, energy usage, and sustainable design requirements, performance, key components and visual effect.
   d. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors that will become necessary to accommodate the proposed substitution.
   e. A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
   f. Cost information, including a proposal of the net change, if any in the Contract Sum. When specifically required by the OAR, the cost information shall include a 10-year return on investment study indicating both First Costs, Operation and Maintenance costs as well as energy usage variations (as applicable) at a minimum.
   g. Certification by the Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time that may subsequently become necessary as a result of downstream constructability issues that may arise or failure of the substitution to perform adequately.
   h. A paragraph by paragraph comparison and analysis of the related specification section indicating compliance or variation from specification standard. If specified with a "Basis of Design", provide a comparison and analysis of each component of the manufacturers' detailed specification for the "Basis of Design". Each variation shall be substantiated with necessary submission to validate products compliance with specifications.
   i. Failure to include the above requirements in the Request for Substitution may be cause for rejection in its entirety.

C. The Contractor must, prior to submitting to the OAR, thoroughly review all requests for substitution proposed by its subcontractors to ensure that the reuest is not only complete as outlined above but also that the Contractor endorses the request. Requests for Substitution from subcontractors received by the OAR which have not been thoroughly reviewed and endorsed by the Contractor will be rejected,

D. OAR's Action: Additional information or documentation necessary for evaluation of the request may be requested. Notification of approved substitutions will be made by Addendum prior to bid and by a Change Notice after bid.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

A. Conditions: The substitution request will be received and considered by the OAR when one or more of the following conditions are satisfied, as determined by the OAR; otherwise requests will be returned without action except to record noncompliance with these requirements.

1. Extensive revisions to Contract Documents are not required.
2. Proposed changes are in keeping with the general intent of Contract Documents.
3. The request is timely, fully documented and properly submitted.
4. The request is directly related to an "or approved substitution" clause or similar language in the Contract Documents.
5. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
6. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
7. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear. such as additional compensation required for the OAR and Designer for redesign and evaluation services, increased cost of other construction by the Owner or separate contractors, and similar considerations.
8. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where certification is provided that the substitution will overcome the incompatibility.
9. The specified product or method of construction cannot be coordinated with other materials, and where certification is provided that the proposed substitution can be coordinated.
10. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where certification is provided that the proposed substitution provides the required warranty.
11. Where a proposed substitution involves more than the Contractor, each subcontractor shall cooperate with the Contractor to coordinate the Work, provide uniformity and consistency, and to assure compatibility of products.

B. The submittal and the OAR's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

C. If the use of a substitute product requires additional work or modifications to new or existing facilities, all such additional work, including utility modifications shall be borne by the Contractor.

2.2 PROCEDURES

A. Selection Procedures: Options in product selection is governed by the Contract Documents and governing regulations, not by previous industry tradition or project experience. Procedures governing product selection include, but are not limited to the following:

1. Proprietary Specification Requirements: Where a single product or manufacturer is named, provide the product indicated. Other products will not be considered by the OAR.

PART 2 - PRODUCTS

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2. Proposed changes are in keeping with the general intent of Contract Documents.
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4. The request is directly related to an "or approved substitution" clause or similar language in the Contract Documents.
5. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
6. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
7. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear. such as additional compensation required for the OAR and Designer for redesign and evaluation services, increased cost of other construction by the Owner or separate contractors, and similar considerations.
8. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where certification is provided that the substitution will overcome the incompatibility.
9. The specified product or method of construction cannot be coordinated with other materials, and where certification is provided that the proposed substitution can be coordinated.
10. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where certification is provided that the proposed substitution provides the required warranty.
11. Where a proposed substitution involves more than the Contractor, each subcontractor shall cooperate with the Contractor to coordinate the Work, provide uniformity and consistency, and to assure compatibility of products.

B. The submittal and the OAR's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

C. If the use of a substitute product requires additional work or modifications to new or existing facilities, all such additional work, including utility modifications shall be borne by the Contractor.

2.2 PROCEDURES

A. Selection Procedures: Options in product selection is governed by the Contract Documents and governing regulations, not by previous industry tradition or project experience. Procedures governing product selection include, but are not limited to the following:

1. Proprietary Specification Requirements: Where a single product or manufacturer is named, provide the product indicated. Other products will not be considered by the OAR.

a. Advise the OAR before proceeding when it is discovered that the named product is not a feasible solution.

2. Semi-proprietary Specification Requirements: Where two or more products and manufacturers are named, provide one of the products indicated. No substitutions will be permitted unless the specification indicates consideration of other products.

   a. When products are specified by one manufacturer's model numbers or performance criteria with reference to other acceptable manufacturers, products manufactured by the acceptable manufacturers listed must meet minimum performance criteria specified or meet quality of models specified.
   b. Advice the OAR before proceeding when it is discovered that the named product is not a feasible solution.

3. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with the requirements and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.

4. Sustainable Design Requirements: Where Specifications require compliance with specific LEED Credits or Sustainable Design components, provide products that comply with those same requirements or components.

5. Compliance with Standards, Codes, and Regulations: Where the Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standards, codes or regulations specified.

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 25 00

CRFS NO.: _____

CONTRACTOR'S REQUEST FOR SUBSTITUTION

The undersigned hereby submits for consideration the following request for substitution in lieu of the specified item.

Specification Section and Paragraph:_____

Drawings and Details affected:_____

Specified Item/Mfr/Model No.:_____

Proposed Substitution: (Define)

_____

_____

_____

It is the Contractor's responsibility to provide all information necessary to determine the proposed substitution is equal or better than the specified item. Submit complete product description, drawings, photographs, performance and test data, samples and other information necessary for side-by-side evaluation. Fill in ALL BLANKS below:

1. Provide specific reason why this request for substitution is being made:_____

   _____

   _____

2. Identify the recycled materials or components, or the features of this proposed substitution which support its status as "environmentally friendly".

   _____

   _____

3. Does the substitution meet the specified sustainability and/or LEED requirements? Yes_____ No_____. If "yes",explain:

   _____

   _____

   _____

4. Will approval of the proposed substitution affect dimensions, locations, or configurations shown on drawings? Yes_____ No_____. If "yes", explain: _____

   _____

   _____

5. What are the differences between the specified item and the proposed substitution?_____

   _____

   _____

6. Will changes be required to the building or other construction in order to properly install or accommodate the requested substitution? Yes _____ No _____: If "Yes", explain: _____

   _____

   _____

7. Will the Contractor pay for any changes to the building design including re-design, engineering and detailing costs caused by this approval? Yes _____ No _____ If "No", explain:_____

CRFS NO.: _____

CONTRACTOR'S REQUEST FOR SUBSTITUTION

The undersigned hereby submits for consideration the following request for substitution in lieu of the specified item.

Specification Section and Paragraph:_____

Drawings and Details affected:_____

Specified Item/Mfr/Model No.:_____

Proposed Substitution: (Define)

_____

_____

_____

It is the Contractor's responsibility to provide all information necessary to determine the proposed substitution is equal or better than the specified item. Submit complete product description, drawings, photographs, performance and test data, samples and other information necessary for side-by-side evaluation. Fill in ALL BLANKS below:

1. Provide specific reason why this request for substitution is being made;_____

   _____

   _____

2. Identify the recycled materials or components, or the features of this proposed substitution which support its status as "environmentally friendly".____

   _____

   _____

3. Does the substitution meet the specified sustainability and/or LEED requirements? Yes_____ No_____. If "yes",explain:

   _____

   _____

   _____

4. Will approval of the proposed substitution affect dimensions, locations, or configurations shown on drawings? Yes_____ No_____. If "yes", explain: _____

   _____

   _____

5. What are the differences between the specified item and the proposed substitution?_____

   _____

   _____

6. Will changes be required to the building or other construction in order to properly install or accommodate the requested substitution? Yes _____ No _____: If "Yes", explain: _____

   _____

   _____

7. Will the Contractor pay for any changes to the building design including re-design, engineering and detailing costs caused by this approval? Yes _____ No _____ If "No", explain:_____

8. Will the requested substitution meet all applicable Codes, Ordinances, and regulations for this specific application? Yes _____ No _____ If "No", explain:_____

9. Will approval of the requested substitution affect the Work of other trades? Yes ____ No ____ If "Yes", explain:

10. Will approval of the requested substitution affect the specified warranty? Yes ____ No ____ If "Yes", explain:

11. Has the requested substitution been used locally in similar applications? Yes _____ No _____ If "Yes", identify nearest location: _____

12. Will maintenance and service parts be locally available for the requested substitution? Yes _____ No_____
If ""no", identify nearest location: _____

13. Will the requested substitution require waiving of any qualifications or other requirements? Yes _____ No ____
If "Yes", explain: _____

14. Are there any license fees or royalties associated with the requested substitution? Yes _____ No _____
If "Yes", explain:_____

15. Will the requested substitution affect the construction progress schedule? Yes ____ No ____ If "Yes", explain:_

16. Will Owner receive a credit ($$$$) for this proposed substitution? Yes _____ No _____ If "Yes" – state the amount : $_____; if "No", explain: _____

17. Will the date of Substantial Completion be decreased in time if he requested substitution is approved? Yes ___ No _____ If "Yes", date number of calendar days (_____); if "No", explain: _____

The Architect and Owner will not be required to prove any product is not equal or suitable for the Project.

CONTRACTOR'S CERTIFICATION OF EQUAL PERFORMANCE AND ASSUMPTION OF LIABILITY FOR EQUAL PERFORMANCE

The undersigned Contractor states that the performance, function, quality and durability are equivalent or superior to the specified item. If Contractor is a corporation, the legal name of the corporation shall be set forth below, together with signature(s) of he officer of officers authorized to sign contracts, on behalf of the corporation and corporate seal.

If Contractor is a partnership, the true name of the firm and the name(s) of the general partner(s) shall be set forth below with the signature(s) of the partner or partners authorized to sign contracts on behalf of the partnership, and if the Contractor is an individual, his signature shall be placed below. Failure to provide legally binding signature(s) will result in non-consideration of this Request For Substitution..

Submitted By

Corporate Seal)

Attest (If Corporation)

_____
Signature Date

_____
Name (Print)

_____
Title

_____
Firm (Print)

_____
Street Address

_____
City, State, Zip

Witness: _____
(If partnership or individual)

ARCHITECT'S ACTION

_____ Approved By_____ Date: _____
(Signature Required)
_____ Date: _____
(Print Firm Name)

_____ Not Approved By_____ Date: _____
(Signature Required)
_____ Date: _____
(Print Firm Name)

OAR ACTION

_____ Approved By_____ Date: _____
(Signature Required)
_____ Date: _____
(Print Firm Name)

_____ Not Approved By_____ Date: _____
(Signature Required)
_____ Date: _____
(Print Firm Name)

If Contractor is a partnership, the true name of the firm and the name(s) of the general partner(s) shall be set forth below with the signature(s) of the partner or partners authorized to sign contracts on behalf of the partnership, and if the Contractor is an individual, his signature shall be placed below. Failure to provide legally binding signature(s) will result in non-consideration of this Request For Substitution..

Submitted By

Corporate Seal)

Attest (If Corporation)

_____
Signature Date

_____
Name (Print)

_____
Title

_____
Firm (Print)

_____
Street Address

_____
City, State, Zip

Witness: _____
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ARCHITECT'S ACTION

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(Print Firm Name)

_____ Not Approved By_____ Date: _____
(Signature Required)
_____ Date: _____
(Print Firm Name)

OAR ACTION

_____ Approved By_____ Date: _____
(Signature Required)
_____ Date: _____
(Print Firm Name)

_____ Not Approved By_____ Date: _____
(Signature Required)
_____ Date: _____
(Print Firm Name)

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SECTION 01 29 73 - SCHEDULE OF VALUES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes: Schedule of Values.

1. When requested by the OAR, support values given with substantiating data.
2. Use Schedule of Values as a basis for the Applications for Payment.

B. Time Coordination: In coordination of initial submittals and other administrative start-up activities, submit Schedule of Values to the OAR at the earliest feasible date, but in no case later than seven (7) days before initial payment request is to be submitted. The Contractor's Application for Payment cannot be processed for payment until the Contractor has submitted a Schedule of Values acceptable to the OAR.

1.3 FORM OF SUBMITTAL

A. Use AIA Document G-703 Continuation Sheet for the submittal format and provide to the OAR in a MS Excel electronic file.

B. Unless otherwise directed by the OAR, use Table of Contents of the Project Manual as a basis for format or, if a unit price contract, use unit price schedule.

C. Identify each line with number and title as listed in Table of Contents of the Project Manual or unit price schedule.

1.4 PREPARING AND SUBMITTING SCHEDULE OF VALUES

A. The Schedule of Values willbe used as a basis for determining progress payments on the Contract. The Schedule of Values shall be a schedule of cost loaded construction activities equal, in total, to the awarded Contract Price and shall be in a form and of sufficient detail to correctly represent a reasonable apportionment of the Contract Price. Prepare Schedule of Values, in coordination with Progress Schedule. Correlate line items with other administrative schedules and forms required for the Work, including progress schedule, Application for Payment form, listing of subcontractors, schedule of Alternates, schedule of Allowances, listing of products and principal suppliers and fabricators, and schedule of submittals.

B. Provide breakdown of Contract Price in sufficient detail to facilitate continued evaluation of payment requests and progress reports. Breakdown amounts of major cost items into several line items. Round off to nearest whole dollar, but with total equal to Contract Sum.

SECTION 01 29 73 - SCHEDULE OF VALUES

PART 1 - GENERAL

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A. Use AIA Document G-703 Continuation Sheet for the submittal format and provide to the OAR in a MS Excel electronic file.

B. Unless otherwise directed by the OAR, use Table of Contents of the Project Manual as a basis for format or, if a unit price contract, use unit price schedule.

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B. Provide breakdown of Contract Price in sufficient detail to facilitate continued evaluation of payment requests and progress reports. Breakdown amounts of major cost items into several line items. Round off to nearest whole dollar, but with total equal to Contract Sum.

C. Submit one (1) copy of the Schedule of Values to the OAR.

D. Arrange schedule of values with columns to indicate generic name of item, related Specification Sections; subcontractor, supplier, manufacturer, or fabricator; change orders which have affected value; dollar value of item, and percentage of Contract Sum to nearest one-hundredth percent and adjusted to total 100 percent.

E. Margins of Cost:

1. Show line items of indirect costs, and margins on actual costs, only to extent such items will be individually listed in payment requests.
2. Establish each item in Schedule of Values and in payment requests to be complete with total expenses and proportionate share of general overhead and profit margin.
3. Major cost items, which are not directly cost of actual work-in-place, such as distinct temporary facilities, may be either shown as line items in Schedule of Values or distributed as general overhead expense.

F. Break down installed cost into:

1. Cost of product, delivered and unloaded at Job Site with taxes paid. (List under Column F, G-703)
2. Total installed cost, with overhead and profit. (List under Column C, G-703).

1.5 SUBSCHEDULE OF UNIT MATERIAL VALUE

A. Submit a sub-schedule of unit costs and quantities for products for which payments will be requested for stored materials.

B. The form of submittal shall parallel that of the Schedule of Values, with each item identified the same as the line item in the Schedule of Values.

C. The unit quantity for bulk materials shall include Contractor's overages for normal waste.

D. The unit values for the materials: the cost of the material including taxes, delivered and unloaded at the Site.

E. The installed unit value multiplied by the quantity listed shall equal the cost of that item in the Schedule of Values.

1.6 REVIEW AND RESUBMITTAL

A. After review by the OAR, revise and re-submit Schedule (and Schedule of Material Value) as required.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 29 73

END OF SECTION 01 29 73

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SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of the Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:

1. General project coordination procedures.
2. Conservation.
3. Coordination Drawings.
4. Administrative and supervisory personnel.
5. Cleaning and protection.

1.3 COORDINATION

A. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
3. Make provisions to accommodate items scheduled for later installation.

B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

1. Prepare similar memoranda for the OAR and separate contractors where coordination of their work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of schedules.
2. Installation and removal of temporary facilities.
3. Delivery and processing of submittals.

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of the Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:

1. General project coordination procedures.
2. Conservation.
3. Coordination Drawings.
4. Administrative and supervisory personnel.
5. Cleaning and protection.

1.3 COORDINATION

A. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
3. Make provisions to accommodate items scheduled for later installation.

B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

1. Prepare similar memoranda for the OAR and separate contractors where coordination of their work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of schedules.
2. Installation and removal of temporary facilities.
3. Delivery and processing of submittals.

4. Progress meetings.
5. Project closeout activities.

D. Conservation: Coordinate construction operations to assure that operations are carried out with consideration given to conservation of energy, water, and materials.

1. Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work.

1.4 SUBMITTALS

A. Coordination Drawings: Prepare coordination drawings where careful coordination is needed for installation of products and materials fabricated by separate entities. Prepare coordination drawings where limited space availability necessitates maximum utilization of space for efficient installation of different components.

1. Show the relationship of components shown on separate Shop Drawings.
2. Indicate required installation sequences.
3. Comply with the Article "Submittals" contained in each section.

B. Staff Names: At the Pre-Construction meeting, submit a list of the Contractor's principal staff assignments, including the superintendent and other personnel in attendance at the Project Site. Identify individuals and their duties and responsibilities. List their addresses and telephone numbers.

1. Post copies of the list in the Project meeting room, the temporary field office, and each temporary telephone.

PART 2 - PART 2 - PRODUCTS (Not Applicable)

PART 3 - PART 3 - EXECUTION

3.1 GENERAL COORDINATION PROVISIONS

A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.2 CLEANING AND PROTECTION

A. General: Refer to Division 01 74 23 for cleaning and environmental requirements, as well as all other requirements outlined within the General Conditions of the Contract for Construction.

B. Cleaning: Cleaning shall be performed by the Contractor on a daily basis. The entire Work area shall be left in a broom clean, or equivalent condition.

1. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration until Substantial Completion is accepted.
2. Clean and provide maintenance on completed construction necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.

C. Protection - Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

END OF SECTION 01 31 00

B. Cleaning: Cleaning shall be performed by the Contractor on a daily basis. The entire Work area shall be left in a broom clean, or equivalent condition.

1. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration until Substantial Completion is accepted.
2. Clean and provide maintenance on completed construction necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.

C. Protection - Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

END OF SECTION 01 31 00

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SECTION 01 31 14.13 – SYSTEM INTERRUPTIONS / UTILITY OUTAGE NOTIFICATION PROCEDURES

PART 1 - GENERAL

1.1. RELATED DOCUMENTS

A. Drawings and General Conditions of the Contract, including other Division 1 Specification Sections, apply to this Section.

B. The Contractor and their subcontractors shall comply with all system interruptions and utility outage notification requirements, procedures and/or forms specified herein.

C. Documents

1. Use the latest version of the UON Procedures for Contractors and the UON Checklist in Section 00 62 93 Construction Administration Forms

D. GOAA Construction Forms

1. Use the latest version of the UON Forms listed in Section 00 62 93 Construction Administration Forms

1.2. DEFINITIONS

Acronym	Refers to:
UON	Utility Outage Notification
GOAA	Greater Orlando Aviation Authority
OAR	Owner's Authorized Representative
AAR	Authority's Authorized Representative
MSDS	Material Safety Data Sheet
PPE	Personal Protection Equipment
LOTO	Lock-Out Tag-Out (electrical safety procedures)
APM	Automated People Mover
BHS	Baggage Handling Systems
IT	Information Technology
GPR	Ground Penetrating Radar
SAM	Security Area Monitor
MOT	Maintenance of Traffic
AOC	Airport Operations Center
AOA	Airport Operations Area
AHJ	Authority Having Jurisdiction

1.3. GENERAL INSTRUCTIONS

A. System interruptions and utility outage notifications (UONs) are required during maintenance tasks, renovation work, tenant moves, and new construction work (the Work) in any and all instances where existing systems, utilities, services or operations are understood to be impacted by the Work.

SECTION 01 31 14.13 – SYSTEM INTERRUPTIONS / UTILITY OUTAGE NOTIFICATION PROCEDURES

PART 1 - GENERAL

1.1. RELATED DOCUMENTS

A. Drawings and General Conditions of the Contract, including other Division 1 Specification Sections, apply to this Section.

B. The Contractor and their subcontractors shall comply with all system interruptions and utility outage notification requirements, procedures and/or forms specified herein.

C. Documents

1. Use the latest version of the UON Procedures for Contractors and the UON Checklist in Section 00 62 93 Construction Administration Forms

D. GOAA Construction Forms

1. Use the latest version of the UON Forms listed in Section 00 62 93 Construction Administration Forms

1.2. DEFINITIONS

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1.3. GENERAL INSTRUCTIONS

A. System interruptions and utility outage notifications (UONs) are required during maintenance tasks, renovation work, tenant moves, and new construction work (the Work) in any and all instances where existing systems, utilities, services or operations are understood to be impacted by the Work.

B. The Contractor is required to plan, research, communicate, conduct and close out all utility outage notifications issued as required for the Contractor to effectively and expeditiously conduct the Work.

C. The Contractor is required to ensure that all execution steps, those outlined herein and those implied, and those required to plan, research, communicate, conduct and close out all utility outage notifications, have been followed to minimize interruptions to existing operations while completing the Work.

D. The Contractor is required to submit the completed UONs at least 120 hours (144 hours for a Security UON) in advance of execution of the Work. The advance submittal duration for UONs submitted after 5:00 pm on a normal business day or Noon on a normal business Friday does not begin until the next normal business day. Note that advance notification time starts after Owner Authorization of the UON.

E. UONs shall be sent to the Clearinghouse by the OAR or AAR for Action; the Clearinghouse has a 48 hour clock to Accept, Reject, or Accept the UON with Modifications. The Owner (GOAA Sponsor or OAR) will authorize the UON.

F. UONs associated with Security systems must be published at least 96-hours in advance of the work, whereas all other UONs must be published at least 72-hours in advance of the work. Note that these advance notification times start after Owner's Authorization of the UON.

G. In cases where there is both a Security UON and another type of UON (2nd UON) needed for the work, both UONs shall be sent together for Clearinghouse Action.

H. The Contractor is required to follow/make use of the latest revision of the UON Construction Forms and associated UON Procedures for Contractors and the UON Checklist.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION

3.1. UON PLANNING

A. Research

1. The Contractor is required to research all available information, including review of conformed documents, as-built drawings, previous and associated UONs, and, as required, field installations and conditions, for preparation of a complete UON.
2. The Contractor is required to provide all required permits prior to execution of the Work.

B. Site Installation Crew Conference

1. The Contractor is required to conduct and evidence a site installation UON conference with the trade crew personnel that will be executing the Work outlined in the UON, on location.

C. MOT (where required)

1. The Contractor is required to include MOT information should the UON or any activity to enable the Work as outlined in the UON, impact existing vehicular or pedestrian traffic flow or patterns.

D. UON Which Includes Slab Drilling

1. The Contractor is required to include Ground Penetrating Radar or X-Ray services for all UONs that involve drilling into or through ground or concrete slabs or decks.

E. Site Safety Plan Review and Briefing

1. The Contractor is required to review the site-specific safety plan with the trade crew personnel, and evidence that the review/briefing covered proper requirements and procedures associated with Arc Flash Studies, Personal Protection Equipment (PPE), and Lock-Out/Tag-Out, as required for the Work outlined in the UON.

F. UON Affecting APM

1. The Contractor is required to coordinate with, and where required, be trained by Bombardier or Crystal Mover, on any and all Work anticipated to affect the Automated People Movers systems.

G. UON Affecting BHS

1. The Contractor is required to coordinate with GOAA Operations on all work anticipated to affect the Baggage Handling Systems.

H. UON Affecting IT

1. The Contractor is required to formally request access into Communications Rooms to the OAR who will then coordinate with the Owner. Access into any Communications Room is limited to experienced and certified personnel having GOAA photo identification badges, performing the Work and for a limited amount of time. The Owner will most likely limit access to only the firm actually performing the work in the Communications Rooms. The Contractor shall allow sufficient time (a minimum of 72 hours) for the processing of an access request for Communications Rooms.

2. The Contractor is required to coordinate with GOAA IT, through the OAR, all work anticipated to affect the infrastructure, telecommunication systems, and/or emergency telephones at the elevators.

I. UON Affecting Life Safety

1. The Contractor is required to research sprinkler valve locations and Fire Alarm Point Numbers affected; this information MUST be included in any UON submitted and must be coordinated with GOAA Life Safety, through the OAR.
2. The Contractor MUST be in communication with the COMM Center at every step outlined in the UON Checklist
3. The Contractor CANNOT leave a closed valve unattended for ANY reason (or leave property) in the closed position without either restoring the valve to its normal operating condition or establishing an OAR-approved, ongoing fire watch.

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1. The Contractor is required to formally request access into Communications Rooms to the OAR who will then coordinate with the Owner. Access into any Communications Room is limited to experienced and certified personnel having GOAA photo identification badges, performing the Work and for a limited amount of time. The Owner will most likely limit access to only the firm actually performing the work in the Communications Rooms. The Contractor shall allow sufficient time (a minimum of 72 hours) for the processing of an access request for Communications Rooms.

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3. The Contractor CANNOT leave a closed valve unattended for ANY reason (or leave property) in the closed position without either restoring the valve to its normal operating condition or establishing an OAR-approved, ongoing fire watch.

J. External Resources to Support UON

1. It is not unusual for UONs to require external resources that enable and support the actual work to be performed as outlined in the UON. The Contractor is required to provide all external resources necessary to successfully execute the UON.
2. The Contractor is required to identify the external resources required to complete the UON.
3. External resources may include, but are not limited to; personnel to direct the public around affected areas (Greeters), Security Area Monitors (SAMs), Off-Duty law enforcement officers, flagmen, elevator technicians, certified systems technicians (Life Safety – CSG), and/or temporary signage.

3.2. SITE PERMITS

A. Electrically Safe Work Condition Permit

1. All UON work associated with an energized electrical power source will require an Electrically Safe Work Condition Permit. The Contractor is required to have a qualified and licensed electrician complete all information required on the Electrically Safe Work Condition Permit.
2. The Contractor is required to coordinate, through the OAR, with GOAA Safety for its review and authorization of the Work once the appropriate safe work items and tasks have been verified.
3. The Contractor is required to display the completed and signed-off Electrically Safe Work Condition Permit in the area of Work during the entire time covered by the UON.

B. Hot Work (Burn) Permit

1. All UON work that involves grinding, welding, or dust-generating tasks will require a Hot Work (Burn) Permit. The Contractor is required to complete all information required on the Hot Work (Burn) Permit.
2. The Contractor is required to coordinate with the Airport's Safety Consultant for its review and authorization of the Work once the Hot Work (Burn) Permit information is deemed accurate.
3. The Contractor is required to display the completed and signed-off Hot Work (Burn) Permit in the area of Work.

C. Sunshine 1 Notification for non-GOAA Owned Utility Work

1. The Contractor is required to obtain required Sunshine 1 notifications for all non-GOAA owned utility work and submit to the OAR prior to start of the UON. The Contractor is required to display notifications at the area of Work.

3.3. PRIOR TO EXECUTION OF UON WORK

A. Prior to the execution of the Work as outlined in the UON, the Contractor is required to;

1. Ensure that all equipment, tools and materials required for the Work is on site
2. Ensure adequate number of qualified personnel required for the Work is on site
3. Reassess and confirm that the timeframe to conduct the Work is adequate
4. Revisit the UON work plan and trade crew logic to complete the Work

5. Ensure the UON has been approved, and that a signed copy is in hand and displayed at the Work areas
6. When applicable, verify transfer switches go to an alternate power source before the start of the outage

B. Should temporary electrical power be required to execute the Work as outlined in the UON, the Contractor is required to:

1. Ensure the temporary electrical power source or generation unit(s) has been adequately sized to handle the load
2. Ensure the temporary electrical power source or generation unit(s) is on site and ready
3. Ensure its location has been approved by the OAR
4. Ensure proper conductors to connect the temporary electrical power generation unit(s) and transfer switch(es) are on site
5. Ensure the temporary electrical power source or generation unit(s) has been started, and voltage and rotation verified
6. Ensure sufficient fuel for the temporary electrical power generation unit(s)
7. Ensure a refueling source and spill kit have been set up
8. Ensure a dedicated fire extinguisher is available for the temporary electrical power generation unit(s)
9. Ensure a successful test run of the temporary electrical power generation unit(s) and transfer switch(es) through a complete cycle
10. Ensure that emergency contact information is displayed on the temporary electrical power generation unit(s)
11. Ensure that the temporary electrical power generation unit(s) and transfer switch(es) have been left in their proper configuration

3.4. VERBAL NOTIFICATION PRIOR TO EXECUTION OF UON WORK

A. Prior to the execution of the Work outlined in the UON, the Contractor is required to complete all tasks associated with verbally notifying interested or affected parties. The Contractor is required to complete the UON Checklist with the entities listed below:

1. Revisit recipients on Call List
2. Briefly describe the UON work to those on the Call List
3. Contact Maintenance Dispatch / Central Plant on ALL UONs: (407) 825-4000
4. Contact Airport Operations Center on ALL UONs: (407) 825-3840 for an updated assessment of late flight departures and arrivals and/or other potential operational impacts to airlines or airlines use of BHS
5. Contact Airport BHS Operations on ALL UONs: (407) 825-BAGS
6. Contact Airfield Operations on UONs where high-mast lighting is involved or if traffic movement on AOA will be affected: (407) 825-2036
7. Contact Communications Center on UONs where Fire Alarm and/or Life Safety systems (including fire doors or suppressions systems) are affected: (407) 825-2065
8. Coordinate with Life Safety Department to ensure that proposed UON does not interfere with other previously scheduled work
9. Contact Bombardier or Crystal Mover on UONs where the APM is affected: (407) 825-2406 or (407) 825-5080. The Contractor is hereby notified that if flights are delayed the proposed UON work may be delayed as a result.
10. Contact Schindler on UONs where elevators or escalators are affected: (407) 825-7327 or call Central Plant via radio. The Contractor is hereby notified that only Schindler technicians are qualified to remove units from service, should their services be required.

3.5. EXECUTION OF UON WORK

A. The Contractor is required to ensure that only qualified, and where required, licensed Installation personnel will be performing the Work as described in the UON.

B. For Life Safety- Sprinkler Valves

1. Once a valve is closed, verification from the COMM Center MUST confirm that the management system has flagged that particular valve in a trouble state and it notes that the valve has been closed.
2. A tag must be affixed to the valve, by the Contractor to include the following information:

   a. Company Name
   b. Technician Closing the Valve
   c. Time and Date of Closure
   d. Contact Information of person closing the valve
   e. Project number
   f. Expected duration (or attach a copy of the UON)
   g. Area affected (or attach copy of the UON)

3.6. POST EXECUTION OF UON WORK

A. After completion of the Work as outlined in the UON, the Contractor is required to have its qualified supervisor;

1. For Life Safety – Sprinkler Valves

   a. Once the valve is put back to its normal position, the COMM Center must be called to reset the valve—give location
   b. Once the valve is confirmed reset and back to normal, only then can the TAG be removed by the Contractor
   c. If for some reason the Contractor finds an issue with the valve and it cannot be opened, tamper switch malfunctions, leaks, or won't reset, a work order must be submitted immediately for GOAA to address.
   d. Contractor CANNOT leave the valve unattended for ANY reason (or leave property) in the closed position without either restoring the valve to its normal operating condition or establishing an OAR-approved, ongoing fire watch.
   e. The Contractor's Project Manager (PM)/Superintendent is responsible to confirm that the system is back to normal before shift's end
   f. In the event of a malfunction in the Tamper Switch which causes the valve to remain in trouble (which would "indicate" still closed) but the valve is actually open, the Contractor's PM/Superintendent MUST call the COMM Center to make sure the trouble is annotated and written confirmation that the valve IS open
   g. In NO CASE shall a sprinkler valve ever be disabled electronically on the fire alarm system.

2. Ensure that the Work has been in fact completed as planned
3. Ensure that no tools have been left inside electrical gear/equipment
4. Authorize removal of LOTO items, only after confirming completion of the UON Work, and as described in items 1 and 2 above
5. Ensure posted UON is removed as soon as the Work has been completed

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3. Ensure that no tools have been left inside electrical gear/equipment
4. Authorize removal of LOTO items, only after confirming completion of the UON Work, and as described in items 1 and 2 above
5. Ensure posted UON is removed as soon as the Work has been completed

6. Verbally notify all recipients on the Call List, as described in section 3.4, that the UON Work has been completed
7. Ensure that a weekly inspection/test plan is in place and communicate inspection dates to the OAR
8. Notify, in writing, to the OAR, of any and all Code compliant items or other anomalies encountered during the UON Work for resolution
9. Update panel schedules with any new information immediately after the completion of the UON work. The Contractor is hereby notified that a typed panel schedule update, per NEC 408.4, must be in place within seven (7) days of the UON work completion

3.7. FAILURE TO COMPLY

A. The Contractor's adherence to the UON process and procedures herein outlined is critical in ensuring minimal impacts to ongoing airport operations during and after the completion of the Work requiring UONs.

B. Adverse impacts to the Contractor's schedule caused by the Contractor's failure to comply with the process and procedures herein outlined, will require the Contractor to recover the time and any and all associated costs will be borne by the Contractor.

C. Should the Contractor's noncompliance become chronic, the Owner will contract the required resources to complete the UON process and procedures from others, but the associated costs, if any, will be borne by the Contractor.

END OF SECTION 01 31 14.13

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SECTION 01 31 19 - PROJECT MEETINGS

PART 1 - GENERAL

1. 1 RELATED DOCUMENTS

A. Drawings and General Conditions of the Contract, including other Division 1 Specification Sections, apply to this Section.

1. 2 SUMMARY

A. This Section specifies administrative and procedural requirements for project meetings, including, but not limited to, the following:

1. Job coordination meetings (JCMs).
2. Preconstruction/preinstallation conferences.

1. 3 PROGRESS MEETINGS

A. General: Conduct Job Coordination Meetings (JCMs) at the Project Site, or at an alternate location designated by the OAR on a bi-weekly basis.

1. The Owner may request additional Job Coordination Meetings or may require the Contractor to increase the frequency of JCMs, to once-a-week, depending upon project progress. Additional meetings or changes in meeting frequency, as directed by the OAR, shall not affect the cost of the original Contract.

B. Attendees: In addition to the Contractor, Designer and OAR, each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.

C. Agenda: The OAR will record meeting minutes and update the agenda.

1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Discuss whether schedule revisions are required to insure that current and subsequent activities will be completed within the Contract Time.

2. Contractors Look Ahead: Contractor shall present and distribute a three (3) week look ahead schedule during the "Schedule" portion of the meeting.
3. Review the present and future needs of each entity present, including such items as:

a. Interface requirements.
b. Time.
c. Sequences.
d. Deliveries.
e. Off-site fabrication problems.

f. Access.
g. Site utilization.
h. Submittals.
i. Requests for information.
j. Non-compliance notices.
k. Temporary facilities and services.
l. Hours of work.
m. Resource allocation.
n. Hazards and risks.
o. Housekeeping.
p. Quality and work standards.
q. Safety issues.
r. Change orders.
s. Documentation of information for payment requests.
t. Sustainable Design Requirements

D. Reporting: Transcript copies of each meeting will be distributed to each attendee and to those parties who were scheduled but unable to attend.

E. Schedule Updating: Refer to Section 01 32 13, Scheduling of Work.

F. As-Built Documents: Review progress of as-built documents for all disciplines of work. The Contractor and OAR shall coordinate a time to review the as-built documents the same day as the JCM.

1.4 PRECONSTRUCTION/ PREINSTALLATION CONFERENCES

A. General: Where required by the OAR or by individual specification sections, conduct preconstruction conferences at the Project Site before each construction activity that requires coordination with other construction.

B. Attendees: The Installer and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the OAR of scheduled meeting dates.

1. Review the progress of other construction activities and preparations for the particular activity under consideration at each preconstruction conference, including, but not limited to, the following:

a. Contract Documents.
b. Options.
c. Shop Drawings, Product Data, and quality-control samples.
d. Coordination requirements.
e. Time schedules.
f. Weather limitations.
g. Manufacturer's recommendations.
h. Warranty requirements.
i. Governing regulations.
j. Inspecting and testing requirements.
k. Recording requirements.

f. Access.
g. Site utilization.
h. Submittals.
i. Requests for information.
j. Non-compliance notices.
k. Temporary facilities and services.
l. Hours of work.
m. Resource allocation.
n. Hazards and risks.
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1.4 PRECONSTRUCTION/ PREINSTALLATION CONFERENCES

A. General: Where required by the OAR or by individual specification sections, conduct preconstruction conferences at the Project Site before each construction activity that requires coordination with other construction.

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1. Review the progress of other construction activities and preparations for the particular activity under consideration at each preconstruction conference, including, but not limited to, the following:

a. Contract Documents.
b. Options.
c. Shop Drawings, Product Data, and quality-control samples.
d. Coordination requirements.
e. Time schedules.
f. Weather limitations.
g. Manufacturer's recommendations.
h. Warranty requirements.
i. Governing regulations.
j. Inspecting and testing requirements.
k. Recording requirements.

l. Protection.
m. Related change notices.
n. Purchases.
o. Deliveries.
p. Possible conflicts.
q. Compatibility problems.
r. Acceptability of substrates.
s. Temporary facilities.
t. Space and access limitations.
u. Safety.
v. Required performance results.

2. Record significant discussions of each conference, and the approved schedule. Promptly distribute a typewritten copy of the record of the meeting to all attendees.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION 01 31 19

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SECTION 01 32 13 – SCHEDULING OF WORK

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section provides for the comprehensive depiction, measurement, assessment and reporting of project progress and status pursuant to the sub-articles entitled "Contractor's Construction Schedules" of the General Conditions. The Contractor's responsibility shall include scheduling of all work within its Contract scope of work, creation of a Preliminary Schedule, a Baseline Schedule, production of reports, narratives, execution of the plan described by the current accepted schedule, participation in meetings with the OAR, and submission of Progress Schedules and revision data, as set forth herein. Conventional Critical Path Method (CPM) techniques must be utilized to satisfy the requirements of this section.

1.3 DEFINTIONS

A. Activity: A discrete entity of a project schedule that when combined relationally with others develop a network that can be used for planning, scheduling and monitoring of a construction project. Activities contain durations derived from applied resources such as cost, manpower, equipment and material.

1. Critical Activity: An activity that must start and finish as planned.
2. Predecessor Activity: An activity preceding another activity in a network.
3. Successor Activity: An activity succeeding another activity in a network.

B. Critical Path Method (CPM): An analytical process of scheduling activities using formalized procedures such as "forward pass" and "backward pass" establishing the optimum sequence and duration of operation inclusive of the interrelation of the effort required for the timely completion of the project. Forward pass calculations provide the earliest time in which a project can complete providing "early" dates. Backward pass calculations provide the latest time in which a project can complete providing "late" dates.

C. Total Float: The difference between the early and late dates and is the amount of time an activity can be delayed without delaying the overall project completion.

1. Float is not intended for the exclusive use or benefit of either the Owner or Contractor. It is considered jointly owned by both parties and is a resource available as needed to meet the Contract Times.

2. Float suppression techniques such as use of discretionary logic, inflated activity duration and/or lag/lead is prohibited.

D. Critical Path: The longest continuous path of interrelated activities with the least amount of total float establishing the minimum overall duration of the project from the data date to completion.

E. Data Date: The date (and time) by which all progress is captured for a given time period.

F. Work Breakdown Structure (WBS): A hierarchical arrangement that defines the project by phases, deliverables and work packages.

1. WBS shall be the Contractor's primary means to organize the schedule. The OAR may need to dictate the Contractor's WBS levels to adhere to the overall program organization.
2. Activity Coding at the PROJECT LEVEL can be used by the Contractor as a secondary means of organizing the schedule but GLOBAL Activity Coding is prohibited.

G. Cost Loading: The allocation of the schedule of values necessary for the completion of an activity as planned. The sum of the costs for all activities must equal the total Contract Price unless otherwise approved by the OAR.

1. Cost Loading, at a minimum, must inherently depict the monthly cash flow derived from the CPM Schedule.

H. Resource Loading: The allocation of manpower, material and equipment necessary for the completion of an activity as planned.

1. Manpower loading must be defined utilizing manhours per activity.

I. Relationship Types: Activity dependency or CPM Schedule logic

1. Finish-to-Start (FS) - A relationship between activities in which the start of a successor activity depends on the finish of its predecessor activity.
2. Start-to-start (SS) - A relationship between activities in which the start of a successor activity depends on the start of its predecessor activity.
3. Finish-to-Finish (FF) - A relationship between activities in which the finish of a successor activity depends on the finish of its predecessor activity.
4. Start-to-Finish (SF) - A relationship between activities in which the finish of a successor activity depends on the start of its predecessor activity. (Rarely used)

J. Open-Ends: Activities without predecessor or successor activities.

K. Dangling Activities: Activities with FF or SF predecessor relationship types (open start) or SS or SF successor relationship types (open finish).

1.4 QUALITY ASSURANCE

2. Float suppression techniques such as use of discretionary logic, inflated activity duration and/or lag/lead is prohibited.

D. Critical Path: The longest continuous path of interrelated activities with the least amount of total float establishing the minimum overall duration of the project from the data date to completion.

E. Data Date: The date (and time) by which all progress is captured for a given time period.

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1. WBS shall be the Contractor's primary means to organize the schedule. The OAR may need to dictate the Contractor's WBS levels to adhere to the overall program organization.
2. Activity Coding at the PROJECT LEVEL can be used by the Contractor as a secondary means of organizing the schedule but GLOBAL Activity Coding is prohibited.

G. Cost Loading: The allocation of the schedule of values necessary for the completion of an activity as planned. The sum of the costs for all activities must equal the total Contract Price unless otherwise approved by the OAR.

1. Cost Loading, at a minimum, must inherently depict the monthly cash flow derived from the CPM Schedule.

H. Resource Loading: The allocation of manpower, material and equipment necessary for the completion of an activity as planned.

1. Manpower loading must be defined utilizing manhours per activity.

I. Relationship Types: Activity dependency or CPM Schedule logic

1. Finish-to-Start (FS) - A relationship between activities in which the start of a successor activity depends on the finish of its predecessor activity.
2. Start-to-start (SS) - A relationship between activities in which the start of a successor activity depends on the start of its predecessor activity.
3. Finish-to-Finish (FF) - A relationship between activities in which the finish of a successor activity depends on the finish of its predecessor activity.
4. Start-to-Finish (SF) - A relationship between activities in which the finish of a successor activity depends on the start of its predecessor activity. (Rarely used)

J. Open-Ends: Activities without predecessor or successor activities.

K. Dangling Activities: Activities with FF or SF predecessor relationship types (open start) or SS or SF successor relationship types (open finish).

1.4 QUALITY ASSURANCE

A. Scheduling Qualifications: The Contractor must employ a designated Project Scheduler or Scheduling Consultant. This specialist must be experienced in CPM Schedule development, management and reporting and have a minimum of 5 years' experience with Primavera Scheduling Software, preferably P6, on Projects of similar size and complexity.

1. At any time the OAR may order the Contractor to replace the designated scheduler with another if the current scheduler is deemed unacceptable based on qualifications or performance.

B. Required Computerized CPM Scheduling System: For Projects exceeding $2 million in Contract Price, Oracle Primavera P6 Professional Project Management (P6 PPM) or Oracle Primavera P6 Enterprise Project Portfolio Management (P6 EPPM) must be the computer scheduling software system utilized. For Projects less than $2 million, any other planning software may be employed (e.g. Primavera Contractor, Microsoft Project, etc.) providing the Critical Path can be derived. Schedules for projects less than $2 million do not require resource or cost loading.

C. Schedule Alignment Meeting: Conduct a Prescheduling conference at Project Site to ensure compliance with all requirements within this Section as well as related documents as it relates to CPM Schedule development, management and reporting including but not limited to:

1. Review Planning Software.
2. Verify Scheduling Qualifications.
3. CPM Schedule Organization (WBS) and Detail.
4. Owner / Interface Milestones between concurrent or other Projects.
5. Review time required for Owner / OAR activity such as submittal review, testing and inspecting, commissioning, training and closeout.
6. Updating Procedures.
7. Activity ID Coding and File Nomenclature and submission.
8. Coordination and time commitments for subcontractors and all other entities involved.

1.5 SUBMITTALS

A. Submit the following in accordance with the General Conditions of the Contract for Construction (00 72 13).

B. Format: Submit required submittals via email unless directed otherwise by the OAR in the following format:

1. Working P6 electronic (XER) file with the following File Naming Structure indicative of Bid Package Number, Data Date and file extension:

a. BP-###_DD=dd-mmm-yy.xer(mpp)

2. PDF files for Detailed (All Activities) CPM Schedule and Longest Path with the following Title Block information (use Header and/or Footer):

a. Contractor's Name
b. Owner's Bid Package Number & Project Name
c. Schedule Type (e.g. "Detailed Schedule", "Longest Path", etc.)
d. Data Date
e. Run Date
f. File Name
g. Symbol Legend
h. P6 Project ID
i. Layout & Filter Name

PART 2 - PRODUCTS

2.1 CONTRACTOR'S PROJECT SCHEDULES

A. Produce the following Construction Schedules in accordance with the General Conditions of the Contract for Construction (00 72 13).

1. Preliminary Schedule
2. Baseline Schedule
3. Progress Schedules

B. Produce the following Schedules as required and in accordance with the General Conditions of the Contract for Construction (00 72 13) as applicable.

1. Recovery Schedules

a. If at any time the Contractor's Progress Schedule indicates the project is two or more weeks (14 calendar days) behind any current Contract completion date(s), the Contractor must first submit both a graphic (Longest Path) and written (narrative) report measuring the extent of the delay regardless of assumed causation and then a separate Recovery Schedule indicating means by which the Contractor intends to regain schedule compliance.

2. Job Coordination Meeting (JCM) Look-Ahead Schedules

a. With each monthly Progress Schedule, the Contractor must develop a Four Week Look-Ahead Schedule derived from the update indicating one week of As-Built progress prior to the Data Date and four weeks of As-Planned progress beyond the Data Date. It is intended that this document shall serve as the working schedule document at the JCM to ascertain incremental weekly progress until the following monthly Progress Schedule is updated. If at the discretion of the OAR this document becomes unusable due to out of sequence progress or for other reasons such that the incremental weekly progress cannot be ascertained, the Contractor must implement weekly updates until the OAR is satisfied that the progress is being accurately depicted.

a. Contractor's Name
b. Owner's Bid Package Number & Project Name
c. Schedule Type (e.g. "Detailed Schedule", "Longest Path", etc.)
d. Data Date
e. Run Date
f. File Name
g. Symbol Legend
h. P6 Project ID
i. Layout & Filter Name

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b. Look-Ahead Schedules must be submitted in colored .pdf format via email to the OAR at least 48 hours prior to the JCM.

3. Delay Claim Entitlement Schedules

a. If at the Contractor's discretion a delay beyond the Contractors control is encountered and after the Contractor has made every effort and reasonable attempt to mitigate the impacts of the delay without additional costs to the Owner or disruption to the project, a request for additional time may be requested. All requests for extensions of time must be submitted within the confines of the Contract and accompanied by a reputable delay analysis technique and narrative in accordance with the General Conditions. Time extensions shall only be granted if the delay is excusable and impacts the critical path of the project at the time of the delay.

4. As-Built Schedules

a. After all Contract work items are complete, and prior to final payment, the Contractor shall submit the final Progress Schedule that will be called the "As-Built" Schedule, showing actual start and actual finish dates for all schedule activities and milestones.

5. Early Completion Schedules

a. The contract completion date shall not be changed by submission of a schedule that shows an early completion unless specifically authorized by OAR Change Order.

2.2 CONTRACTOR'S SCHEDULE NARRATIVES

A. Any and all Project Schedules (e.g. Preliminary, Baseline, Progress, Recovery and/or Request for Time Extension) shall be submitted with an accompanying narrative explaining the schedule consistent with its purpose.

2.3 MONTHLY REPORTS

A. Summary Level Schedules, Cash Flow Curves and physical percent complete based on manpower analysis derived from the monthly Progress Schedule must accompany the Contractor's Monthly Reports.

PART 3 - EXECUTION

3.1 SCHEDULE REQUIREMENTS

A. Activity Types: In addition to construction activities, the CPM Schedules shall include other individual activities and milestones as applicable:

1. Contractual milestones, such as Notice to Proceed, Substantial Completion, Certificate of Occupancy, Final Completion or any other Contract milestones.
2. Design deliverables and milestones as applicable.
3. Permitting Activities as applicable.
4. Procurement Activities such as: subcontractor scope review and buyout, submittal and shop drawing preparation, submittal approval, release and order of material and equipment, material and equipment fabrication and delivery.
5. Interim Contractor's milestones as applicable.
6. All Utility Outage Notifications (UON's) as required.
7. Owner Activities such as Owner Furnished Contractor Installed (OFCI), Owner Furnished and Owner installed (OFOI), Tenant move-out and occupancy, swing space and Owner required utility payments or any other Owner activity that may affect schedule.
8. Completion Activities such as Commissioning, testing, turnover, training, Contractor and OAR punch and final inspections by system.

B. The OAR may identify additional interfaces during the course of the Work and the Contractor will incorporate these in the Progress Schedule as required. No composite activities allowed. The CPM Schedules must break out all activities into their respective trades. At a minimum, at least one construction activity and one procurement string must be identified in the CPM Schedules for each subcontractor on the project as applicable.

C. Activity ID's: The Contractor's CPM Schedule shall contain an intelligent activity identification coding system that must include the Bid Package Number (BP-###) as a prefix to all Activity ID's in the schedule. If activities are deleted from the schedule after the Baseline has been accepted, the Contractor must log these occurrences and submit this information to the OAR consistent with the schedule submission inclusive of the activity deletions. It is recommended that the Contractor include this information with the accompanying schedule narrative. Duplication of Activity ID's with differing activity descriptions is prohibited.

D. Activity Duration: With exception to the Preliminary Schedule, the duration for each activity shall be based on manpower assignment and production rates estimated in work days and may not exceed 20 days except for:

1. Procurement Activities such as fabrication or lead time. Procurement activity strings must include separate activities for submittal preparation, approval, release and order, fabricate and delivery. Any procurement activity requiring duration greater than 60 days must be explained by the Contractor before accepted into the CPM Schedules by the OAR.

E. Activity Relationships: Precedence diagramming method with the four conventional relationship types shall be utilized to show activity dependence. At a minimum, each activity shall have one FS or SS predecessor and one FS or FF successor with the exception of the first and last activities in the network such that no other activities shall be open-ended or dangling.

F. Lags and Leads: The use of lags or leads between activities is not encouraged. Instead, it is preferable to use an activity to represent the time lapse between two activities. The use of negative lags is prohibited.

1. Contractual milestones, such as Notice to Proceed, Substantial Completion, Certificate of Occupancy, Final Completion or any other Contract milestones.
2. Design deliverables and milestones as applicable.
3. Permitting Activities as applicable.
4. Procurement Activities such as: subcontractor scope review and buyout, submittal and shop drawing preparation, submittal approval, release and order of material and equipment, material and equipment fabrication and delivery.
5. Interim Contractor's milestones as applicable.
6. All Utility Outage Notifications (UON's) as required.
7. Owner Activities such as Owner Furnished Contractor Installed (OFCI), Owner Furnished and Owner installed (OFOI), Tenant move-out and occupancy, swing space and Owner required utility payments or any other Owner activity that may affect schedule.
8. Completion Activities such as Commissioning, testing, turnover, training, Contractor and OAR punch and final inspections by system.

B. The OAR may identify additional interfaces during the course of the Work and the Contractor will incorporate these in the Progress Schedule as required. No composite activities allowed. The CPM Schedules must break out all activities into their respective trades. At a minimum, at least one construction activity and one procurement string must be identified in the CPM Schedules for each subcontractor on the project as applicable.

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1. Procurement Activities such as fabrication or lead time. Procurement activity strings must include separate activities for submittal preparation, approval, release and order, fabricate and delivery. Any procurement activity requiring duration greater than 60 days must be explained by the Contractor before accepted into the CPM Schedules by the OAR.

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F. Lags and Leads: The use of lags or leads between activities is not encouraged. Instead, it is preferable to use an activity to represent the time lapse between two activities. The use of negative lags is prohibited.

G. Date Constraints: The use of constraints is not encouraged but at times necessary especially considering internal Owner operation and external Owner projects that may be occurring simultaneously with inter-project dependency. Any use of constraints must be explained by the Contractor consistent with the schedule submission inclusive of the constraint(s). Depending on the type of constraint(s) used and where the constraint(s) are applied may lead to suspect schedule calculations specifically related to total float. It is the responsibility of the Contractor to verify the accuracy of the schedule calculations derived from the use of constraints.

H. Calendars: With the sole exception of the required Global Resource Calendar, all calendars must be represented on the Project Level and shall not inherit holidays or exceptions derived from their originating Global Calendar. Any other use of Global Calendars is prohibited. Any schedule submitted with Global Calendars will be rejected and not accepted until remedied. It is recommended that the Contractor develop the following Project Calendars with the following labels:

1. BP-###: 5 Day-8hrs/day (with 7 standard holidays) depicting the standard work week (M-F) with Saturday, Sundays and the Standard Holidays represented as non-work days. Standard holidays include: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Friday after and Christmas Day.

    a. Assign this calendar to all Contractors' general work activities.
    b. Assign this calendar to all Owner activity.

2. BP-###: 7 Day-8hrs/day (All Days) depicting all days containing no holidays or non-work days.

    a. Assign this calendar to all Summary or Level of Effort Activities.
    b. Assign this calendar to Contractual Milestones.

I. Other Project Calendars may be used as needed by the Contractor on a case by case basis but in each case, supporting documentation explaining its use must be submitted to the OAR for acceptance. All Project Calendars detailed work hours by work day must be set to 8:00am-12:00pm and from 1:00pm-5pm with 12:00pm-1:00pm represented as a non-work hour such that each work day is representative of 8 hours unless approved otherwise by the OAR.

J. Activity Coding: The Contractor must utilize WBS to organize the CPM Schedules. Prior to and part of the OAR's Baseline Schedule acceptance, the Contractor must provide the OAR their proposed WBS for OAR approval.

K. Data Dates: The Data Date shall be controlled by the OAR so that all Contractors are using the exact same dates each month consistent with the Owner's overall program. The Owner shall provide the Contractor reporting calendar information where monthly update Data Dates will be specified.

3.2 CONTRACT MODIFICATIONS

A. For each proposed contract modification and concurrent with its submission, the Contractor shall prepare a delay analysis demonstrating the impact of the proposed change on the overall project

schedule or interim contract milestone(s) if applicable. If said change is approved by the OAR, the Contractor shall incorporate the contract modification into the Progress Schedules for the period in which the change was issued.

3.3 SCHEDULE CALCULATIONS AND DIAGNOSTICS

A. Multiple Project Schedules will be maintained within the OAR's scheduling system. As such, all schedule data submitted by the Contractor must be submitted on the Project Level. No Global data shall be accepted unless specified otherwise herein.

B. Schedule Calculations and Settings:

1. Maintain open-ended activities as non-critical.
2. All project schedule files shall be updated with actual progress using retained logic prior to submission. Progress override is prohibited.
3. Start-to-Start lag shall be calculated from Early Start.
4. Define critical activities as Longest Path providing it is a continuous path emanating from the Data Date to project completion. Otherwise, use total float less than or equal to zero days.
5. Compute total float as finish float.
6. Relationship Lag shall be calculated based on the Predecessor Activity Calendar.
7. Use Remaining Duration to ascertain activity progress and not percent complete.

C. Schedule Diagnostics: All Project Schedules shall be calculated and analyzed then corrected for all open ended and dangling activities, out of sequence progress and associated schedule corrections as applicable. No activities shall be progressed beyond the Data Date.

3.4 SPECIAL SCHEDULE REPORTS

A. At times and within reason, the OAR may direct the Contractor to develop special reports as needed.

END OF SECTION 01 32 13

schedule or interim contract milestone(s) if applicable. If said change is approved by the OAR, the Contractor shall incorporate the contract modification into the Progress Schedules for the period in which the change was issued.

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7. Use Remaining Duration to ascertain activity progress and not percent complete.

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3.4 SPECIAL SCHEDULE REPORTS

A. At times and within reason, the OAR may direct the Contractor to develop special reports as needed.

END OF SECTION 01 32 13

SECTION 01 32 33 - PHOTOGRAPHIC DOCUMENTATION

PART 1 - GENERAL

1. 1 RELATED DOCUMENTS

A. Drawings and General Conditions/Provisions of the Contract, including Contractual Conditions and other Division 1 Specification Sections, apply to this Section.

1. 2 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Preconstruction videos.
2. Periodic construction photographs.
3. Final completion construction photographs.

1. 3 INFORMATIONAL SUBMITTALS

A. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each photograph and video recording. Indicate elevation or story of construction. Include same information as corresponding photographic documentation.

B. Digital Photographs: Submit image files within three days of taking photographs.

1. Submit photos by uploading to Owner's web-based project software site. Include copy of key plan indicating each photograph's location and direction.
2. Identification: Provide the following information with each image description in web-based project software site:

a. Name of Project.
b. Name and contact information for photographer.
c. Name of OAR
d. Name of Contractor.
e. Date photograph was taken.
f. Description of location, vantage point, and direction.
g. Unique sequential identifier keyed to accompanying key plan.

C. Video Recordings: Submit video recordings within seven days of recording.

1. Submit video recordings by uploading to the Owner's web-based project software site. Include copy of key plan indicating each video's location and direction.
2. Identification: With each submittal, provide the following information on web-based project software site:

a. Name of Project.
b. Name and address of photographer.
c. Name of OAR

d. Name of Contractor.
e. Date video recording was recorded.
f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.

1.4 FORMATS AND MEDIA

A. Digital Photographs: Provide color images in JPG format, produced by a digital camera with minimum sensor size of 12 megapixels, and at an image resolution of not less than 3200 by 2400 pixels, and with vibration-reduction technology. Use flash in low light levels or backlit conditions.

B. Digital Video Recordings: Provide digital video in MPEG format. If specified in Contract Documents, provide high-resolution, digital video in MPEG format, produced by a digital camera with minimum sensor resolution of 12 megapixels and capable of recording in full high-definition mode with vibration-reduction technology. Provide supplemental lighting in low light levels or backlit conditions.

C. Digital Images: Submit digital media as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

D. Metadata: Record accurate date and time and GPS location data from camera.

E. File Names: Name media files with date, Project area, and sequential numbering suffix.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PRE-CONSTRUCTION VIDEOS

A. Before starting construction, record video of the site and surrounding properties from different points of view. Record pre-existing conditions of the site and abutting properties obtained from several perspectives. Provide narrative describing the vantage point and area being recorded.

1. Take videos in sufficient number to show existing conditions adjacent to the property before starting work.
2. Take videos of existing improvement adjoining the property in sufficient detail to record accurately the physical conditions at the start of construction.

3.2 CONSTRUCTION PHOTOGRAPHS

A. General: Take photographs with maximum depth of field and in focus.

1. Maintain key plan with each set of construction photographs that identifies each photographic location.

d. Name of Contractor.
e. Date video recording was recorded.
f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.

1.4 FORMATS AND MEDIA

A. Digital Photographs: Provide color images in JPG format, produced by a digital camera with minimum sensor size of 12 megapixels, and at an image resolution of not less than 3200 by 2400 pixels, and with vibration-reduction technology. Use flash in low light levels or backlit conditions.

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1. Take videos in sufficient number to show existing conditions adjacent to the property before starting work.
2. Take videos of existing improvement adjoining the property in sufficient detail to record accurately the physical conditions at the start of construction.

3.2 CONSTRUCTION PHOTOGRAPHS

A. General: Take photographs with maximum depth of field and in focus.

1. Maintain key plan with each set of construction photographs that identifies each photographic location.

B. Periodic Construction Photographs: Take photographs weekly coinciding with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken.

C. LEED Photographs:

1. All LEED photographs shall include date and description.
2. Take weekly photographs of each of the following categories (unless noted otherwise). Photographs are needed as applicable to each stage of the Work. Examples are listed for each category below:

a. Storm Water Pollution Prevention Plan – weekly photographs and photographs after rainfall of 0.5-inches or more.

1) Silt Fence
2) Temporary Seed/Mulch Area
3) Stabilized retention ponds
4) Temporary Swales/berms/detention
5) Dust Control (watering)
6) Gravel construction entries (all locations)
7) Protection of Storm Inlets
8) Temporary Rip-Rap
9) Dewatering

b. Site Conditions

1) Concrete Washout container
2) Masonry ground protection for mobilization area
3) Oil Containment area
4) Tree protection
5) Hoses and construction water
6) Soil condition (concrete fines etc.)

c. Indoor Air Quality

1) Duct protection (plastic wrap on ducts)
2) Gravel entrances to building including dust mitigation measures
3) No smoking, no eating, no drinking inside building signs
4) Designated smoking areas
5) Cleanly swept floors
6) Equipment with sanding bags
7) VOC Compliant Materials (photos of containers, paint, glue, etc.)
8) Construction Filters
9) Source Separation
10) Stored material on dunnage and protected from damage
11) Water intrusion prevention procedures
12) Dehumidifiers
13) Fans
14) Waterproofing
15) Cleaning products
16) Cleaning equipment and other IAQ measures

3. CONSTRUCTION WASTE

a. Food dumpster
b. Co-mingled recycled dumpster
c. Concrete-only dumpster
d. Concrete wash out
e. Piles of materials such as asphalt, concrete to be removed off site and recycled by subcontractors
f. Steel Dumpster

END OF SECTION 01 32 33

3. CONSTRUCTION WASTE

   a. Food dumpster
   b. Co-mingled recycled dumpster
   c. Concrete-only dumpster
   d. Concrete wash out
   e. Piles of materials such as asphalt, concrete to be removed off site and recycled by subcontractors
   f. Steel Dumpster

END OF SECTION 01 32 33

SECTION 01 33 23 - SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Drawings and General Conditions of Contract, includingother Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY:

A. This Section specifies administrative and procedural requirements for submittal of Shop Drawings, Product Data and Samples to verify that products, materials and systems proposed for use comply with provisions of the Contract Documents.

B. Shop Drawings include, but are not limited to, the following:

1. Fabrication Drawings.
2. Installation Drawings.
3. Setting diagrams.
4. Shop-work manufacturing instructions.
5. Templates and patterns.
6. Schedules.
7. Design mix formulas.
8. Coordination Drawings.

C. Product Data include, but are not limited to, the following:

1. Manufacturer's product Specifications.
2. Manufacturer's installation instructions.
3. Standard color charts.
4. Catalog cuts.
5. Roughing-in diagrams and templates.
6. Standard wiring diagrams.
7. Printed performance curves.
8. Operational range diagrams.
9. Mill reports.
10. Standard product operating and maintenance manuals.
11. Material Safety Data Sheets (MSDS).

D. Samples include, but are not limited to, the following:

1. Partial Sections of manufactured or fabricated components.
2. Small cuts or containers of materials.
3. Complete units of repetitively-used materials.
4. Swatches showing color, texture and pattern.
5. Color range sets.
6. Components used for independent inspection and testing.

E. Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:

1. Schedule of Submittals
2. Permits.
3. Applications for payment.
4. Performance and payment bonds.
5. Insurance certificates.
6. Listing of subcontractors.
7. Contractor's construction schedule.
8. Progress Schedules
9. Progress reports.

F. Sustainable Design Submittals: Refer to Section 01 81 13.14 "Sustainable Design Requirements - LEED v4 BD+C" for submittal requirements.

1.3 SUBMITTAL PROCEDURES:

A. Coordination: Coordinate preparation and processing of submittals with performance of the Work.

1. The Contractor shall review submittals before submitting to the OAR. Transmit each submittal to the OAR sufficiently in advance of scheduled performance of related construction activities to avoid delay, but in no case later than Forty Five (45) days before the work related to that submittal is scheduled to commmence. Contractor shall coordinate submittals so as to not affect other trade submissions. If one submittal effects the installation or fabrication of another submittal, then those submittals shall be submitted silmultaneously. If any submittals will be delayed, inform the OAR in writing giving reasons for the delay and a revised submittal schedule. Delays will be subject to OAR's approval. No extension of time will be authorized because of a Contractor's failure to transmit submittals to the OAR sufficiently in advance of the Work to permit processing.
2. The OAR will review all Administrative Submittals. The OAR will review all other submittals for conformance with the Contract Documents prior forwarding the submittals to the Designer.
3. Request for payment of stored materials will not be considered until submittals have been received and approved by the OAR.
4. Transmit submittals to the OAR to prevent delays. The Contractor is responsible for delays accruing directly or indirectly from submission or resubmission of submittal date.
5. Coordinate each submittal with other submittals and related activities that require sequential activity including:

    a. Testing.
    b. Purchasing.
    c. Fabrication.
    d. Delivery.

6. Coordinate transmittal of different types of submittals for the same element of the Work and different elements of related parts of the Work so that processing will not be delayed by the OAR's and Designer's need to review submittals concurrently for coordination.

E. Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:

1. Schedule of Submittals
2. Permits.
3. Applications for payment.
4. Performance and payment bonds.
5. Insurance certificates.
6. Listing of subcontractors.
7. Contractor's construction schedule.
8. Progress Schedules
9. Progress reports.

F. Sustainable Design Submittals: Refer to Section 01 81 13.14 "Sustainable Design Requirements - LEED v4 BD+C" for submittal requirements.

1.3 SUBMITTAL PROCEDURES:

A. Coordination: Coordinate preparation and processing of submittals with performance of the Work.

1. The Contractor shall review submittals before submitting to the OAR. Transmit each submittal to the OAR sufficiently in advance of scheduled performance of related construction activities to avoid delay, but in no case later than Forty Five (45) days before the work related to that submittal is scheduled to commmence. Contractor shall coordinate submittals so as to not affect other trade submissions. If one submittal effects the installation or fabrication of another submittal, then those submittals shall be submitted silmultaneously. If any submittals will be delayed, inform the OAR in writing giving reasons for the delay and a revised submittal schedule. Delays will be subject to OAR's approval. No extension of time will be authorized because of a Contractor's failure to transmit submittals to the OAR sufficiently in advance of the Work to permit processing.
2. The OAR will review all Administrative Submittals. The OAR will review all other submittals for conformance with the Contract Documents prior forwarding the submittals to the Designer.
3. Request for payment of stored materials will not be considered until submittals have been received and approved by the OAR.
4. Transmit submittals to the OAR to prevent delays. The Contractor is responsible for delays accruing directly or indirectly from submission or resubmission of submittal date.
5. Coordinate each submittal with other submittals and related activities that require sequential activity including:

    a. Testing.
    b. Purchasing.
    c. Fabrication.
    d. Delivery.

6. Coordinate transmittal of different types of submittals for the same element of the Work and different elements of related parts of the Work so that processing will not be delayed by the OAR's and Designer's need to review submittals concurrently for coordination.

a. The OAR and Designer reserve the right to withhold action on a submittal requiring coordination with other submittals until related submittals are delivered to the OAR and Designer.

7. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for re-submittals.

a. Allow fourteen (14) days for the OAR and Designers' initial review of each submittal. Where processing must be delayed to permit coordination with subsequent submittals, allow additional time. The OAR will advise the Contractor promptly when a submittal being processed must be delayed for coordination.
b. Where necessary to provide an intermediate submittal between the initial and final submittals, process the intermediate submittal in the same manner as the initial submittal.
c. Allow fourteen (14) days for reprocessing each submittal.
d. No extension of time will be authorized because of a Contractor's failure to transmit submittals to the OAR sufficiently in advance of the Work to permit processing.

B. Submittal Preparation - Division 2 through 49: Place a permanent label or title block on each submittal for identification, and submit the information in PDF format. The Contractor shall provide Submittals in electronic (PDF) format. PDF files will be required for all O&M and Close-out documents. The PDF file shall be enabled for Adobe Reader's Comment and Markup functionality. All stamps and markings described herein shall be electronically duplicated or added before scanning. The PDF files shall be transmitted by way of email or an FTP site to the OAR.

1. Place a permanent title block on each submittal for information.
2. Indicate the name of the firm or entity that prepared each submittal on the ~~label or~~ title block.
3. Provide a space approximately 4 inches by 5 inches on the ~~label or~~ adjacent to the title block to record the Contractor's review and approval markings and the action taken by the OAR and Designer.
4. Include the following information ~~on the label~~ for processing and recording action taken.

a. Project name.
b. Date.
c. Name and address of OAR.
d. Name and address of Designer.
e. Name and address of Contractor.
f. Name and address of subcontractor.
g. Name and address of supplier.
h. Name of manufacturer.
i. Number and title of appropriate Specification Section.
j. Drawing number and detail references, as appropriate.
k. Similar definitive information as necessary.

5. Provide and electronic stamp on each page (sheet) of the submittal with the Contractor's certification statement, or other approval statement, as follows:

"I hereby certify that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated in the work, is in compliance with the Contract Documents, can be installed in the allocated spaces, and is submitted for review by the OAR and Designer.

Certified by Submittal Reviewer_____. Date:_____"

a. Sign the certifying statement or approval statement. The signatures shall be in electronic format.

C. Submittal Transmittal: Package each submittal appropriately for transmittal ~~and handling~~. Transmit each submittal from Contractor to OAR, as indicated, by use of a transmittal form. Submittals received from sources other than the Contractor will be returned to the sender without action. Electronic transmittals must have descriptive subject lines for ease of retrieval. The transmittal form should be the first page in the attached PDF.

1. Record relevant information and requests for data on the transmittal form. On the form, or an attached separate sheet, call attention to deviations from requirements of the Contract Documents, including minor variations and limitations.
2. Include the Contractor's signed certification stating that information submitted complies with requirements of the Contract Documents.
3. Provide places on the form for the following information:

a. Project name.
b. Date.
c. Destination (To:).
d. Source (From:).
e. Names of subcontractor, manufacturer and supplier.
f. Category and type of submittal.
g. Submittal purpose and description.
h. Submittal and transmittal distribution record.
i. Remarks.
j. Signature of transmitter.

1.4 SPECIFIC SUBMITTAL REQUIREMENTS:

A. Shop Drawings: Submit newly prepared information, drawn to accurate scale. DO NOT REPRODUCE CONTRACT DOCUMENTS OR COPY STANDARD PRINTED INFORMATION AS THE BASIS OF SHOP DRAWINGS.

1. Include the following information on Shop Drawings:

a. Dimensions.
b. Identification of products and materials included.
c. Compliance with specified standards.
d. Notation of coordination requirements.
e. Notation of dimensions established by field measurement.

2. Submit Coordination Drawings where required for integration of different construction elements. Show construction sequences and relationships of separate components where necessary to avoid conflicts in utilization of the space available.
3. Encircle, identify with arrow, or otherwise indicate deviations from the Contract Documents on the Shop Drawings.

a. DO NOT USE COLORED HIGHLIGHTERS TO INDICATE SELECTIONS.

Certified by Submittal Reviewer_____. Date:_____"

a. Sign the certifying statement or approval statement. The signatures shall be in electronic format.

C. Submittal Transmittal: Package each submittal appropriately for transmittal ~~and handling~~. Transmit each submittal from Contractor to OAR, as indicated, by use of a transmittal form. Submittals received from sources other than the Contractor will be returned to the sender without action. Electronic transmittals must have descriptive subject lines for ease of retrieval. The transmittal form should be the first page in the attached PDF.

1. Record relevant information and requests for data on the transmittal form. On the form, or an attached separate sheet, call attention to deviations from requirements of the Contract Documents, including minor variations and limitations.
2. Include the Contractor's signed certification stating that information submitted complies with requirements of the Contract Documents.
3. Provide places on the form for the following information:

   a. Project name.
   b. Date.
   c. Destination (To:).
   d. Source (From:).
   e. Names of subcontractor, manufacturer and supplier.
   f. Category and type of submittal.
   g. Submittal purpose and description.
   h. Submittal and transmittal distribution record.
   i. Remarks.
   j. Signature of transmitter.

1.4 SPECIFIC SUBMITTAL REQUIREMENTS:

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   a. Dimensions.
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   c. Compliance with specified standards.
   d. Notation of coordination requirements.
   e. Notation of dimensions established by field measurement.

2. Submit Coordination Drawings where required for integration of different construction elements. Show construction sequences and relationships of separate components where necessary to avoid conflicts in utilization of the space available.
3. Encircle, identify with arrow, or otherwise indicate deviations from the Contract Documents on the Shop Drawings.

   a. DO NOT USE COLORED HIGHLIGHTERS TO INDICATE SELECTIONS.

4. Do not allow Shop Drawing copies which do not have an appropriate final stamp or other marking indicating action taken by the OAR and Designer to be used for construction.
5. Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 30" x 42". Shop drawings submitted as PDF files shall be generated full size of the original and not scale to fit.

B. Product Data: Collect Product Data into a single submittal for each element of construction or system. Sustainable Design Action Submittals shall be submitted as part of the product data submittal package.

1. Encircle, identify with arrow, each copy to show which choices and options are applicable to the Project.

    a. Do not use colored highlights to indicate selection.

2. Where Product Data has been printed to include information on several similar products, some of which are not required for use on the Project, or are not included in this submittal, mark copies to clearly indicate which information is applicable.
3. Where Product Data must be specially prepared for required products, materials or systems, because standard printed data are not suitable for use, submit as "Shop Drawings" not "Product Data."
4. Include the following information in Product Data:

    a. Manufacturer's printed recommendations.
    b. Compliance with recognized trade association standards.
    c. Compliance with recognized testing agency standards.
    d. Application of testing agency labels and seals.
    e. Notation of dimensions verified by field measurement.
    f. Notation of coordination requirements.

5. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
6. In submitting paper, submit a sufficient number of copies to enable the Owner and the OAR to retain 4 copies of each required Product Data submittal; submit two (2) additional copies where copies are required for operating and maintenance manuals. The OAR will return the other marked copies with the action taken and corrections or modifications required.

    a. Unless the OAR and or Designer observes noncompliance with provisions of the Contract Documents or requires re-submittal for other reasons, the initial submittal may serve as the final submittal.

7. Furnish copies of final Product Data submittal to manufacturers, subcontractors, suppliers, fabricators, installers, governing authorities and others as required for performance of the construction activities. Show distribution on transmittal forms.

    a. Do not proceed with installation of materials, products and systems until a copy of Product Data applicable to the installation is in the installer's possession.
    b. Do not permit use of unmarked copies of Product Data in connection with construction.

C. Samples: Submit Samples physically identical with the material or product proposed for use; submit full-size, fully fabricated Samples, cured and finished in the manner specified.

1. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match Designers' Sample where so indicated. Include the following information:

    a. Generic description of the Sample.
    b. Size limitations.
    c. Sample source.
    d. Product name or name of manufacturer.
    e. Compliance with recognized standards.
    f. Compliance with governing regulations.
    g. Availability.
    h. Delivery time.

2. Submit three samples (sets); one set will be returned marked with the action taken. The OAR and Designer will each retain copies.

D. Operating and Maintenance Manuals: Operating and maintenance manuals shall be initially submitted for review at the appropriate 30 percent completion stage of Work under these Sections. The manuals will be reviewed and returned to the Contractor. Corrections shall be made before submittal of the manuals at Project Close-out.

E. In order to facilitate review of product data and shop drawings, they shall be noted, indicating by cross reference the contract drawing sheet number, note, and specification paragraph numbers, where and what item(s) are used for and where item(s) occur in the contract documents.

1.5 OAR AND OR DESIGNER(S) ACTION:

A. Except for submittals for the record, for information and similar purposes, where action and return on submittals is required or requested, the OAR and Designer will review each submittal, mark with appropriate "action," and where possible return within fourteen (14) days of receipt. Where the submittal must be held for coordination the OAR will so advise the Contractor without delay.

1. Compliance with specified characteristics is the Contractor's responsibility, and not considered part of the OAR or Designer review and indication of action taken.

B. The OAR and or Designer will stamp each submittal sheet or page to be returned with a uniform, self-explanatory action stamp appropriately marked and executed to indicate whether the submittal returned is for unrestricted use (no exceptions taken), final-but-restricted use (as marked), must be revised and resubmitted (use not permitted), or without action (as explained on the transmittal form), or other similar type wording.

C. The OAR's and or Designer's review of submittals is for design conformity and general conformance of the contract documents only and does not relieve the Contractor from responsibility for any deviations from the requirements of the Contract Documents. The OAR and or Designer's review shall not be construed as a complete check nor shall it relieve the Contractor from responsibility for errors of any sort in shop drawings or schedules, of from the necessity of furnishing any work required by the Contract Documents which may have been omitted on the shop drawings. The OAR and or Designers' review of a separate item shall not indicate review of the complete assembly in which it functions.

1. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match Designers' Sample where so indicated. Include the following information:

    a. Generic description of the Sample.
    b. Size limitations.
    c. Sample source.
    d. Product name or name of manufacturer.
    e. Compliance with recognized standards.
    f. Compliance with governing regulations.
    g. Availability.
    h. Delivery time.

2. Submit three samples (sets); one set will be returned marked with the action taken. The OAR and Designer will each retain copies.

D. Operating and Maintenance Manuals: Operating and maintenance manuals shall be initially submitted for review at the appropriate 30 percent completion stage of Work under these Sections. The manuals will be reviewed and returned to the Contractor. Corrections shall be made before submittal of the manuals at Project Close-out.

E. In order to facilitate review of product data and shop drawings, they shall be noted, indicating by cross reference the contract drawing sheet number, note, and specification paragraph numbers, where and what item(s) are used for and where item(s) occur in the contract documents.

1.5 OAR AND OR DESIGNER(S) ACTION:

A. Except for submittals for the record, for information and similar purposes, where action and return on submittals is required or requested, the OAR and Designer will review each submittal, mark with appropriate "action," and where possible return within fourteen (14) days of receipt. Where the submittal must be held for coordination the OAR will so advise the Contractor without delay.

1. Compliance with specified characteristics is the Contractor's responsibility, and not considered part of the OAR or Designer review and indication of action taken.

B. The OAR and or Designer will stamp each submittal sheet or page to be returned with a uniform, self-explanatory action stamp appropriately marked and executed to indicate whether the submittal returned is for unrestricted use (no exceptions taken), final-but-restricted use (as marked), must be revised and resubmitted (use not permitted), or without action (as explained on the transmittal form), or other similar type wording.

C. The OAR's and or Designer's review of submittals is for design conformity and general conformance of the contract documents only and does not relieve the Contractor from responsibility for any deviations from the requirements of the Contract Documents. The OAR and or Designer's review shall not be construed as a complete check nor shall it relieve the Contractor from responsibility for errors of any sort in shop drawings or schedules, of from the necessity of furnishing any work required by the Contract Documents which may have been omitted on the shop drawings. The OAR and or Designers' review of a separate item shall not indicate review of the complete assembly in which it functions.

1.6 SUBMITTAL BROCHURE BINDERS: Applicable only to hard copy submittals.

A. Brochure Binders: 3-ring, vinyl covered, with clear view insert type cover and spine.

1. Binder Size: 8.5 x 11.0 inches x size (spine) adequate to easily contain the required submittals. Minimum spine size shall be 1-inch, maximum shall be 3-inches. Provide additional binders if the 3-inch size is not sufficient to properly contain submittals.
2. Binder Cover: Binders shall have a clear view, vinyl pocket on the front cover, adequate to hold an 8.5 inch by 11 inch description sheet. The binder shall have a clear view, vinyl spine pocket adequate to hold an 11 inch long description sheet.

B. Binder Contents: Include the following.

1. Cover sheet; cover sheet shall be white with black letters, minimum 11-inches high and full width of spine pocket. See "EXAMPLES" included at end of this Section.
2. First page shall be a copy of the Specification table of contents.
3. Second page shall be a list of project addresses (see "EXAMPLE").
4. Third page shall be Project information (see "EXAMPLE").
5. Provide reinforced separation sheets tabbed with appropriate specification reference number.
6. Product data sheets.
7. Shop drawings.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 SCHEDULE OF SUBMITTALS DESCRIPTION (SD) AND SUBMITTAL REGISTER

A. General: The following is a description of each submittal type, specified in other Sections, required for the Project. Include each submittal description (SD) in the Submittal Register included as part of this Section.

1. SD-01: Product Data; submittals that provide calculations, descriptions or other documentation regarding the work.
2. SD-02: Manufacturer's Catalog Data (Product Data); data composed of information sheets, brochures, circulars, specifications and product data, and printed information in sufficient detail and scope to verify compliance with requirements of the Contract Documents.
3. SD-03: Manufacturer's Standard Color Charts (Product Data); preprinted illustrations displaying choices of color and finish for a material or product.
4. SD-04: Shop Drawings; graphic representations which illustrate relationship of various components of the work, schematic diagrams of systems, details of fabrications, layout of particular elements, connections, and other relational aspects of the work.
5. SD-05: Design Data (Shop Drawings); design calculations, mix designs, analyses, or other data written and pertaining to a part of the work.
6. SD-06: Instructions (Product Data); preprinted material describing installation of a product, system, or material, including special notices and Material Safety Data Sheets, if any, concerning impedance, hazards, and safety precautions.

7. SD-07: Schedules (Shop Drawings); a tabular list of data or a tabular listing of locations, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.
8. SD-08: Statements (Shop Drawings); a document, required of the Contractor, or through the Contractor by way of a supplier, installer, manufacturer, or other lower tier contractor, the purpose of which is to further the quality or orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel, qualifications, or other verification of quality.
9. SD-09: Reports (Product Data); reports of inspection and laboratory tests, including analysis, an interpretation of test results. Each report shall be properly identified. Test methods used and compliance with recognized test standards shall be described.
10. SD-10: Test Reports (Product Data); a report signed by an authorized official of a testing laboratory that a material, product, or system identical to the material, product or system to be provided has been tested in accordance with requirements specified by naming the test method and material. The test report must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test. Testing must have been within three years of the date of award of this Contract.
11. SD-11: Factory Test Reports (Shop Drawings); a written report which includes the findings of a test required to be performed by the Contractor or an actual portion of the work or prototype prepared for this project before it is shipped to the job site. The report must be signed by an authorized official of a testing laboratory and must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test.
12. SD-12: Field Test Reports (Shop Drawings); a written report which includes the findings of a test made at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation. The report must be signed by an authorized official of a testing laboratory or agency and must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test.
13. SD-13: Certificates (Shop Drawings); statements signed by responsible officials of a manufacturer of a product, system, or material attesting that the product, system, or material meet specified requirements. The statements must be dated after the award of this contract, name the project, and list the specific requirements which it is intended to address.
14. SD-14: Warranties (Product Data); statements signed by responsible officials of a manufacturer of a product, system, or material attesting that the product, system, or material will perform its specific function over a specified duration of time. The statement must be dated, and include the name of the project, the Owner's name, and other pertinent data relating to the warranty.
15. SD-15: Samples; samples, including both fabricated and non-fabricated physical examples of materials, products, and units of work as complete units or as portions of units of work.
16. SD-16: Color Selection Samples (Samples); samples of the available choice of colors, textures, and finishes of a product or material, presented over substrates identical in texture to that proposed for the work.
17. SD-17: Sample Panels (Samples); an assembly constructed at the project site in a location acceptable to the OAR and using materials and methods to be employed in the work; completely finished; maintained during construction; and removed at the conclusion of the work or when authorized by the OAR. A type of sample.
18. SD-18: Sample Installations (Samples); a portion of an assembly or material constructed where directed and, if approved, retained as a part of the work.
19. SD-19: Records; documentation to ensure compliance with an administrative requirement or to establish an administrative mechanism.

7. SD-07: Schedules (Shop Drawings); a tabular list of data or a tabular listing of locations, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.
8. SD-08: Statements (Shop Drawings); a document, required of the Contractor, or through the Contractor by way of a supplier, installer, manufacturer, or other lower tier contractor, the purpose of which is to further the quality or orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel, qualifications, or other verification of quality.
9. SD-09: Reports (Product Data); reports of inspection and laboratory tests, including analysis, an interpretation of test results. Each report shall be properly identified. Test methods used and compliance with recognized test standards shall be described.
10. SD-10: Test Reports (Product Data); a report signed by an authorized official of a testing laboratory that a material, product, or system identical to the material, product or system to be provided has been tested in accordance with requirements specified by naming the test method and material. The test report must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test. Testing must have been within three years of the date of award of this Contract.
11. SD-11: Factory Test Reports (Shop Drawings); a written report which includes the findings of a test required to be performed by the Contractor or an actual portion of the work or prototype prepared for this project before it is shipped to the job site. The report must be signed by an authorized official of a testing laboratory and must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test.
12. SD-12: Field Test Reports (Shop Drawings); a written report which includes the findings of a test made at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation. The report must be signed by an authorized official of a testing laboratory or agency and must state the test was performed in accordance with the test requirements; state the test results; and indicate whether the material, product, or system has passed or failed the test.
13. SD-13: Certificates (Shop Drawings); statements signed by responsible officials of a manufacturer of a product, system, or material attesting that the product, system, or material meet specified requirements. The statements must be dated after the award of this contract, name the project, and list the specific requirements which it is intended to address.
14. SD-14: Warranties (Product Data); statements signed by responsible officials of a manufacturer of a product, system, or material attesting that the product, system, or material will perform its specific function over a specified duration of time. The statement must be dated, and include the name of the project, the Owner's name, and other pertinent data relating to the warranty.
15. SD-15: Samples; samples, including both fabricated and non-fabricated physical examples of materials, products, and units of work as complete units or as portions of units of work.
16. SD-16: Color Selection Samples (Samples); samples of the available choice of colors, textures, and finishes of a product or material, presented over substrates identical in texture to that proposed for the work.
17. SD-17: Sample Panels (Samples); an assembly constructed at the project site in a location acceptable to the OAR and using materials and methods to be employed in the work; completely finished; maintained during construction; and removed at the conclusion of the work or when authorized by the OAR. A type of sample.
18. SD-18: Sample Installations (Samples); a portion of an assembly or material constructed where directed and, if approved, retained as a part of the work.
19. SD-19: Records; documentation to ensure compliance with an administrative requirement or to establish an administrative mechanism.

20. SD-20: Operating and Maintenance Manuals (Records); data intended to be incorporated in an Operating and Maintenance Manual
21. SD-21: Test Reports of Existing Conditions; a document describing existing conditions and operations of systems and components prior to the start of any work. Testing shall be held in the presence of the OAR and Designer. Provide copies of the test reports to the OAR and Designer.
22. SD-22: Demonstrations; physical operation of equipment and systems by factory authorized representatives to demonstrate to the Owner's facility personnel proper operation of systems. Provide all required documentation that certified completed demonstration.
23. SD-23: As-Built Drawings; delineated documentation accurately depicting final installation location of components and systems of the building.
24. SD-24: Shop Drawings in Electronic format; when drawings are required all materials shall be provided in AUTOCAD latest release and PDF on a CD.
25. SD-25: Coordination Drawings; special type of Shop Drawing that show the relationship and integration of different construction elements that require close and careful coordination during fabrication or during installation to fit in the restricted space provided or to function as intended.
26. SD-26: Certification of Approved Disposal of Hazardous Materials; certification signed by the Contractor indicating legal disposal of hazardous materials.
27. SD-27: CD/DVD Training Tape; taped training instructions to be used by the Owner's personnel.
28. SD-28: Spare Parts Memo; a listing of spare parts required; refer to
29. Section 01 70 00 Execution and Closeout Requirements.
30. SD-29: UL Letter of Finding; a document from Underwriters Laboratories Inc., attesting compliance with UL's standard for connection to an existing lightning protection system; a document from Underwriters Laboratories Inc., attesting compliance with UL's standard for UL Master Label.
31. SD-30: Equipment Check-Out Memos; document signed by the manufacturer's authorized representative stating that equipment has been installed and is operating in accordance with the manufacturer's specifications; refer to Section 01 70 00 Execution and Closeout Requirements.

B. Submittal Register: The Contractor is to maintain an accurate updated submittal register and will bring this register to each scheduled JCM with the OAR and the Designer. This register should include the following items:

1. Submittal-Description and Number assigned.
2. Date to OAR
3. Date to Designer.
4. Date returned to OAR from Designer.
5. Date returned to Contractor from OAR.
6. Submittal Status.
7. Date of Re-submittal and Return (as applicable).
8. Date material released (for fabrication).
9. Projected date of fabrication.
10. Projected date of delivery to site.
11. Status of submittal.

SUBMITTAL REGISTER (PART A) - Headings

Contract Number:

Project Title:

Spec. Section Number	Submittal Description (SD) Number	Spec. Paragraph Number	OAR Reviewer	Designer Reviewer	Trans Control Number	Planned Submittal Date
(A)	(B)	(C)	(D)	(E)	(F)	(G)

SUBMITTAL REGISTER (PART B) - Headings

Location: Contractor:

Action Code	Date of Action	Date Rec'd from Contr.	Date FWD to other Reviewer	Date Rec'd from other Reviewer	Action Code	Date of Action	Mailed to Cont.	Remarks
(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)

Contract Number:

Project Title:

Spec. Section Number	Submittal Description (SD) Number	Spec. Paragraph Number	OAR Reviewer	Designer Reviewer	Trans Control Number	Planned Submittal Date
(A)	(B)	(C)	(D)	(E)	(F)	(G)

SUBMITTAL REGISTER (PART B) - Headings

Location: Contractor:

Action Code	Date of Action	Date Rec'd from Contr.	Date FWD to other Reviewer	Date Rec'd from other Reviewer	Action Code	Date of Action	Mailed to Cont.	Remarks
(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)

EXAMPLE - List of Project Addresses

PROJECT ADDRESSES

OWNER:

OAR:

DESIGNER:

MECHANICAL ENGINEER:

ELECTRICAL ENGINEER:

CIVIL ENGINEER:

GENERAL CONTRACTOR:

SUBCONTRACTORS:

EXAMPLE - Project Information

PROJECT INFORMATION

NOTE TO CONTRACTOR: Fill in the blanks below and insert one copy as page number 3 in each Submittal Brochure.

Project Number and Name:_____
Contractor's Job Superintendent: _____ Job Phone No.: _____

Subcontractor's Job Superintendent: _____ Job Phone No.: _____

Date Project Bids: _____

Official Project Starting Date: _____

Date Technical Information Brochures Submitted: _____

Days Allowed for Construction: _____

Target Completion: _____

The following items shall be completed before date of Contractor's Request for Substantial Completion:

Date of Performance Verification Information Submitted: _____

Date Check-Out Memos Submitted: _____

Date Written Operating Instructions Submitted: _____

Date Maintenance Information Submitted: _____

Date Marked-Up Progress Prints Submitted: _____

Date As-Built Corrections Submitted: _____

Date Contractor's Instruction Conference with Owner: _____

Date Contractor's Request for Acceptance: _____

Date Project Accepted: _____

EXAMPLE - Project Information

PROJECT INFORMATION

NOTE TO CONTRACTOR: Fill in the blanks below and insert one copy as page number 3 in each Submittal Brochure.

Project Number and Name:_____
Contractor's Job Superintendent: _____ Job Phone No.: _____

Subcontractor's Job Superintendent: _____ Job Phone No.: _____

Date Project Bids: _____

Official Project Starting Date: _____

Date Technical Information Brochures Submitted: _____

Days Allowed for Construction: _____

Target Completion: _____

The following items shall be completed before date of Contractor's Request for Substantial Completion:

Date of Performance Verification Information Submitted: _____

Date Check-Out Memos Submitted: _____

Date Written Operating Instructions Submitted: _____

Date Maintenance Information Submitted: _____

Date Marked-Up Progress Prints Submitted: _____

Date As-Built Corrections Submitted: _____

Date Contractor's Instruction Conference with Owner: _____

Date Contractor's Request for Acceptance: _____

Date Project Accepted: _____

EXAMPLE - Description Sheet Cover

**GREATER ORLANDO
AVIATION AUTHORITY**

**ORLANDO
INTERNATIONAL
AIRPORT**

BID PACKAGE NO. 000

[PROJECT NAME]

ELECTRICAL SUBMITTAL BROCHURES

EXAMPLE - Description Sheet – Cover

**GREATER ORLANDO
AVIATION AUTHORITY**

**ORLANDO
INTERNATIONAL
AIRPORT**

BID PACKAGE NO. 000

[PROJECT NAME]

SYSTEMS SUBMITTAL BROCHURES

EXAMPLE - Description Sheet – Cover

**GREATER ORLANDO
AVIATION AUTHORITY**

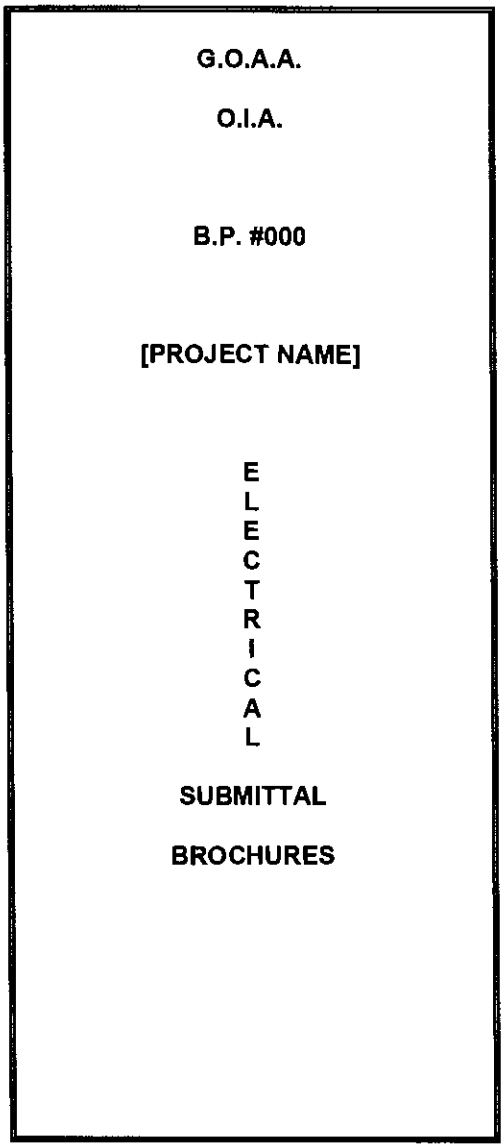
**ORLANDO
INTERNATIONAL
AIRPORT**

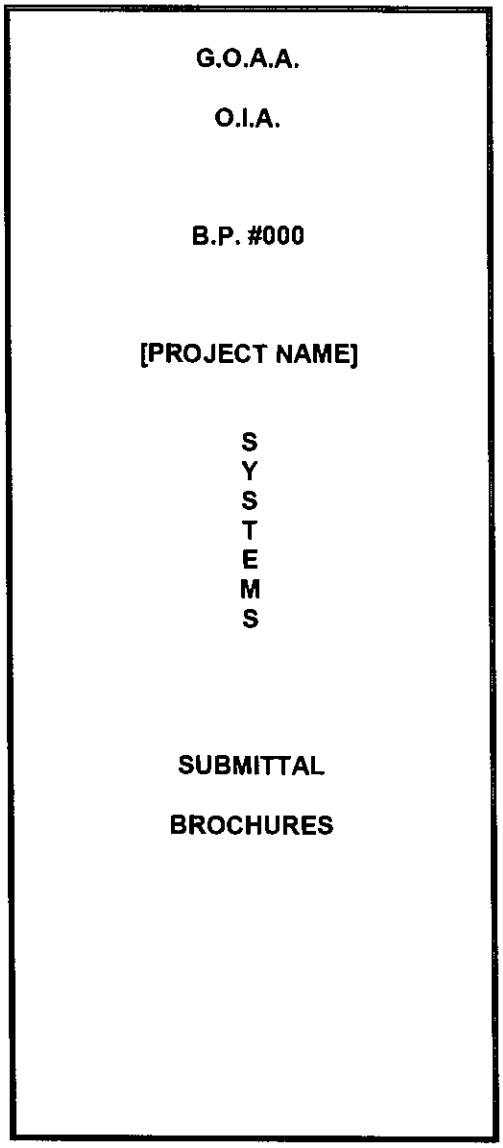
BID PACKAGE NO. 000

[PROJECT NAME]

SYSTEMS SUBMITTAL BROCHURES

EXAMPLE - Description Sheet - Spine





END OF SECTION 01 33 23

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SECTION 01 33 29 - SUSTAINABLE MATERIAL CONTENT FORMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This section includes information, tracking and reporting forms that are required for compliance with certain prerequisites and credits needed for the Project to obtain "LEED Version 4 Building Design and Construction" (LEED v4 BD+C) certification. Certification criteria is based on the USGBC's LEED v4 BD+C scorecard and criteria outlined in Specification Section 01 81 13.14 "Sustainable Design Requirements - LEED v4 BD+C". This specification includes only some of the required forms and does not intend to provide all of the tracking and reporting required for compliance with the "LEED Version 4 Building Design and Construction" (LEED v4 BD+C) requirements.

1.3 DEFINITIONS

A. LEED: USGBC's "LEED Version 4 Building Design and Construction."

1. Reference specification section 01 81 13.14 "Sustainable Design Requirements - LEED v4 BD+C" for definitions and terminology included within "LEED Version 4 Building Design and Construction" (LEED v4 BD+C).

1.4 GENERAL REQUIREMENTS

A. Forms:

1. LEED Checklist - Construction Credits only
2. BPDO Tracking Form
3. IEQ VOC Tracking Form
4. LEED Closeout Matrix
5. Material Reconciliation Form
6. Indoor Air Quality Filter Log

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 33 29

SECTION 01 35 46 - INDOOR AIR QUALITY MANAGEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. The Contractor shall be responsible for providing and maintaining air quality standards for the duration of construction, throughout Substantial Completion and until project turnover to the Owner.

B. This section includes:

1. HVAC Protection
2. Source Control
3. Pathway Interruption
4. Housekeeping
5. Scheduling
6. Building Testing

1.3 REFERENCE STANDARDS

A. LEED V4 BD&C Construction Indoor Air Quality Management Plan

B. Sheet Metal and Air Conditioning Contractors' National Association, Inc., Duct cleanliness for new construction guidelines; SMACNA 2000. See SMACNA website for electronic copy (www.smacna.org).

C. ASHRAE 129-1997: Measuring Air-Change Effectiveness

D. Sheet Metal and Air Conditioning-General Contractors National Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction, second addition, 2007, ANSI/SMACNA 008-2008 Chapter 3, "Control Measures".

E. ANSI/ASHRAE Standard 52.2-1999: Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size.

F. South Coast Air Quality Management District (SCAQMD) Rule #1168: "Adhesive and Sealant Primers", including most recent amendments.

G. SCAQMD Rule 1113, Architectural Coatings, rules in effect January 1, 2004.

H. Green Guard Environmental Institute Children and Schools Program - Certified low VOC adhesives, resilient flooring, paints, insulation, acoustical ceiling tiles, etc. See www.greenguard.org.

SECTION 01 35 46 - INDOOR AIR QUALITY MANAGEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section.

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G. SCAQMD Rule 1113, Architectural Coatings, rules in effect January 1, 2004.

H. Green Guard Environmental Institute Children and Schools Program - Certified low VOC adhesives, resilient flooring, paints, insulation, acoustical ceiling tiles, etc. See www.greenguard.org.

I. Green Seal (GS) Standard GC-03, VOC limits for anti-corrosive and anti-rust paints.

J. Green Seal (GS) Standard GS-11 "Paints", First Edition, May 1993.

K. Green Seal Standard 36 (GS-36) for commercial adhesives, effective October 19, 2000. www.greenseal.org.

L. Carpet and Rug Institute (CRI) "Green Label Plus" IAQ Testing Program for Carpet, Cushion and Adhesive.

M. Scientific Certification Systems "Indoor Advantage Gold" and "Floor Score" programs.

N. California Department of Public Health (CDPH) Standard Method v1.1–2010

1.4 DEFINITIONS

A. Dry Products: Products used in a solid state, including gypsum board, carpet, acoustical panels and tiles, and textiles.

B. MERV: Minimum Efficiency Reporting Value.

C. Priority Products: Products known to be high chemical emitters, long term emitters, and those expected to present emissions in high amounts (high surface area).

D. Threshold Limit Value (TLV): Industrial Work Place Standard as defined by ACGIH.

E. Wet Products: Products used in a liquid or semi-liquid state, including adhesives, joint sealers, paints, and coatings.

F. Ventilation: is the process of supplying and removing air to and from interior spaces by natural or mechanical means.

G. Volatile organic compounds (VOCs) are chemical compounds based on carbon and hydrogen structures that are vaporized at room temperatures. VOCs are one type of indoor air contaminant.

1.5 ACTION SUBMITTALS

A. Indoor air quality plan documentation: Submit the following in accordance with SECTION 01 81 13.14 Sustainable Design Requirements - LEED v4 BD+C, 01 33 23 Shop Drawings Product Data and Samples and 01 78 00 Closeout Submittals

1. A Project Specific Indoor Air Quality Plan for review and approval
2. A Site Utilization and Storage Plan
3. Digital photographs demonstrating compliance with the construction indoor air quality management measures. Photographs shall be date stamped, labeled and submitted with each payment application. Examples of Photography shall include but not be limited to the following:

    a. Duct Protection
    b. Signage (designated smoking and eating areas)

c. General Housekeeping
d. Low Emitting Material Compliant Products
e. Source Separation
f. Stored Materials
g. Construction Filters
h. Building Entrance Protection Measures

4. Cut sheet(s) of filtration media used during construction, values highlighted. All filtration shall have at least a Minimum Efficiency Reporting Value (MERV) 8.
5. Utilize project filter log (see Specification Section 01 33 29 – Sustainable Material Content Forms). Filter log shall be submitted monthly (during use). Log shall include media type, media locations, time and date of installation and all filter changes made, by location. Final filter log shall be included with closeout documentation.
6. Cut sheets for all particle control devices utilized for indoor particle control.
7. Indoor Air Quality Test Report (see below testing criteria)

    a. Provide copies of Indoor Air Quality Test Report from Indoor Environmental Consultant.
    b. Include in report:

        1) Sampling location map.
        2) Summary of sampling and analytical methods employed.
        3) Copy of field sampling logs.
        4) Laboratory analytical data for each contaminant and summary table showing compliance with LEED V4 criteria.

1.6 SOURCE CONTROL

A. No smoking shall be allowed on-site except in project designated smoking locations.

B. Utilize Low Emitting Materials as specified throughout the project.

C. Construction Ventilation and Preconditioning:

1. Temporary Construction Ventilation: Maintain sufficient temporary ventilation of areas where materials are being used that emit VOCs. Maintain ventilation continuously during installation, and until emissions dissipate after installation. If continuous ventilation is not possible via buildings HVAC system(s) then ventilation shall be supplied via open windows and temporary fans, sufficient to provide no less than three air changes per hour.
2. During dust producing activities (e.g. drywall installation and finishing) use particle control devices, turn ventilation system off, protect openings in supply and return HVAC system from dust infiltration. Provide temporary ventilation as required.
3. Preconditioning: Whenever possible, and prior to installation, allow products which have odors and significant VOC emissions to off-gas in dry, well-ventilated spaces for 14 calendar days prior to installation. Off -gassing locations should be in accordance with manufacturer's instructions for storage.

    a. Condition products without containers and packaging to maximize off- gassing of VOCs

c. General Housekeeping
d. Low Emitting Material Compliant Products
e. Source Separation
f. Stored Materials
g. Construction Filters
h. Building Entrance Protection Measures

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    a. Condition products without containers and packaging to maximize off- gassing of VOCs

4. The mechanical room shall be kept free of debris and waste during the construction process. To the extent possible, the building shall be swept daily to avoid excessive construction dust within the room.
5. Construction work that generates air pollution will be avoided where ductwork or air handling equipment is being installed. If visible air pollutants are present in a space where ductwork is to be installed, spot cleaning or other measures will be used to prevent ductwork or equipment contamination.

    a. Electric equipment will be used instead of gasoline-powered equipment whenever practical.
    b. Bottled gas will be used in place of diesel fuel whenever practical.
    c. Exhaust from gasoline or diesel vehicles will be kept away from air intake pathways.
    d. Fuel-burning equipment will be cycled off between uses during extended periods.
    e. The idling of motor vehicles, especially within close proximity of the building, will be limited to avoid infiltration into the building envelope.
    f. All containers used throughout the project shall be kept sealed during inactive periods to avoid off-gassing within the building.
    g. Dust generating tasks should contain a means of protection (dust bags, particle control devices, wet applications, etc.) prior to the start-up of the HVAC system. Once start-up of the HVAC system has occurred within the building all dust generated particulate must be contained.
    h. Provide for and adhere to a designated space for all pipe cutting work. Oil and clippings from cutting process shall be 100% contained and disposed of or recycled in an authorized manner. Subcontractor shall protect the floor and adjacent surfaces from oil and debris caused by the cutting process by use of a non-permeable barrier.
    i. Local temporary exhaust will be accomplished using fans, duct extensions, filters, or other approved method.
    j. Building louvers should be temporarily protected with filter media.

1.7 SEQUENCING

A. Environmental Issues:

1. As practical, sequence odorous and/or VOC emitting products prior to installation of porous and fibrous materials (such as ACT, Carpet etc.). When impractical, utilize temporary partitioning to limit indoor air quality problems.
2. Complete all interior finish material installation no less than fourteen (14) days prior to Substantial Completion to allow for successful building testing.

PART 2 - PRODUCTS

2.1 AIR INFILTRATION MEDIA

A. If the system is to be used during construction, temporary filters must be installed at all equipment return air locations and at fresh intake supply locations. MERV 8 filter (or better) shall be used and replaced as needed to maintain maximum particle capture potential. Replacement of filters shall be done in accordance with the manufacturer's instructions, visual inspection, as well as at Substantial Completion. An active log shall be kept of all filter locations and shall include date of

initial installation and subsequent filter changes. All components of the distribution on the return side will be protected, including but not limited to:

1. The portion of the Energy Recovery Unit upstream of the central fan.
2. Return vents, ducts and shafts.
3. Heat pump intakes.
4. Transfer ducts.

PART 3 - EXECUTION

3.1 FIELD QUALITY CONTROL

A. Pathway Interruption

1. To reduce the transportation of soils and dirt into the building until walkways and permanent entrances are installed, gravel pads or other protection methodology shall be implemented and maintained at all construction entrances into the building.
2. Utilize barriers as needed to protect against potential cross contamination in the building.
3. Temporarily seal construction areas as needed.

B. Housekeeping

1. Suppress dust with approved low-odor wetting compounds and / or sweeping compounds.
2. A regular housekeeping schedule will be instituted. Cleaning measures and frequency will be selected according to the pollutants generated in a space.
3. Spills of water or solvent will be cleaned up immediately. Remove accumulated water from the building as needed or daily, whichever is more stringent.
4. Increase cleaning frequency for dust control during dust generating activities.
5. Remove accumulated construction debris as needed or daily, whichever is more stringent.
6. Protect all interior porous materials (drywall, insulation, carpet, etc) from exposure to moisture. Sequence activities to facilitate protection of porous materials.
7. Attention will be given to cleaning hidden or hard-to-reach surfaces, such as wall cavities, tops of door, ledges, and behind water closets.

C. Storage

1. Materials will be handled and stored according to the manufacturer's recommendations.
2. Highly absorbent materials like duct liner, acoustic tile, carpeting, or insulation will be stored indoors in accordance with manufacturers recommendations. Unless otherwise advised, material shall be kept in the original packaging, on dunnage, and or covered/sealed.
3. Moderately porous materials like gypsum board will be stored indoors, protected on dunnage and away from dust and materials prone to off-gas VOC's.
4. Indoor framing lumber will be stored indoors whenever possible. If stored outdoors, the lumber will be covered with a waterproof covering, stored off the ground, located away from standing water and exposed to air flow.
5. Dense material like glass, metal framing, ductwork and equipment will be covered and kept dry.
6. If condensation forms on cold material, care will be taken not to expose it to dust or other particles. If exposed to pollution, housekeeping measures will be used promptly to clean the material before installation.

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6. If condensation forms on cold material, care will be taken not to expose it to dust or other particles. If exposed to pollution, housekeeping measures will be used promptly to clean the material before installation.

7. No materials will be stored in rooms containing air-handling equipment, other than materials intended for use in same.

D. Protection:

1. The Contractor shall be responsible for protecting the Work from moisture, in order to prevent growth of fungus, bacteria and other biological contaminants.
2. Install weatherproof enclosures to protect the work from exterior sources of moisture.
3. Store construction materials off the ground, in clean, dry area(s) to prevent porous materials such as gypsum board, insulation, ceiling tile, wood and similar products from becoming wet.
4. Moisture Stains: Materials with evidence of moisture damage, including stains, are not acceptable, including both stored and installed materials. Take special care to prevent accumulation of moisture on installed materials within packaging during delivery, storage, and handling to prevent development of molds and mildew on packaging and on products.

    a. All installed porous materials that have been exposed to moisture for more than 72 hours, shall immediately be removed from site and disposed of. properly
    b. All materials showing signs of mold and/or signs of mildew, including materials or with moisture stains shall immediately be removed from site and properly disposed of.
    c. In the case that an unanticipated event permits the entry of water into new construction, the Contractor shall perform procedures to dry out construction within 24 hours. Restoration drying techniques shall be employed to achieve and maintain conditions that will not support biological growth. Consider the use of desiccant drying, which is a very effective way to prevent mold growth and accelerate drying of wet materials, including concrete.

E. Duct Protection:

1. Seal ducts during transportation, delivery, and construction to prevent accumulation of construction dust, moisture and/or construction debris within ducts.
2. Store ductwork in clean, dry conditions and keep ductwork sealed while it is stored.
3. Wipe down internal surfaces of ductwork immediately prior to installation to remove dust.
4. Seal open ends on uncompleted ductwork and overnight for all work in progress.
5. During installation, protect ductwork waiting to be installed with surface wrapping, etc.
6. Duct work installed prior to dry-in must be secondarily protected and inspected for entrapment of moisture.

3.2 CLEANING

A. Final Cleaning Environmental Issues:

1. Duct cleaning refer to Section 23 31 00 "HVAC Ducts and Casings" for procedures and requirements.
2. Cleaning procedures shall be in strict compliance with all requirements of the Green Seal Standards and Certifications, GS 42 including but not limited to:

    a. Certified GS-37 general cleaning products

        1) Certified CCD 110 degreasing compounds
        2) Certified CCD 146 Hard Surface areas
        3) Certified CCD 148 carpet and upholstery care

4) Certified GS-40 industrial areas
5) CCD 112 or 115 odor control additives
6) Green Seal GS09- paper towel products
7) Green Seal GS01 Toilet Paper Products
8) Recycled Content Trash Bags
9) Vacuum cleaners certified by carpet and rug institute "Green Label" testing program
10) Powered floor maintenance buffers and burnishers must have devices for particle capture
11) Replace all air filters (i.e., pre and final filters) just prior to Substantial Completion.

PART 4 - INDOOR AIR QUALITY ASSESSMENT

4.1 AIR TESTING

A. Indoor Environmental Consultant Qualifications:

1. Contractor shall employ and pay for an Indoor Environmental Consultant to perform specified indoor air quality testing. Owner or Owner's representation shall be present at time of testing.
2. Minimum 5 years' experience in conducting indoor environmental quality evaluations per LEED BD&C requirements.
3. After construction ends and before occupancy, conduct baseline IAQ testing using protocols consistent with the methods listed in the attached Table for all occupied spaces. Use current versions of ASTM standard methods, LEED V4 BD&C Air Testing Requirements, EPA compendium methods, or ISO methods, as indicated. Laboratories that conduct the tests for chemical analysis of formaldehyde and volatile organic compounds must be accredited under ISO/IEC 17025 for the test methods they use.
4. Select testing locations with the least ventilation but the greatest concentration of VOCs and other contaminants. Use current versions of ASTM or ISO methods.
5. Complete a testing map show all area to be tested and type of test to be conducted.
6. Determine the number of testing locations dependent on the size of the building and number of ventilation systems. Locations must include all occupied spaces. If sampling is used, all space types must be represented (e.g., office and classroom). Test at least one location per ventilation system for each occupied space type. There must be a minimum of one test per floor. The locations selected for testing must represent the worst case zones where the highest concentrations of contaminants of concern are likely to occur. ((i.e. For offices, retail, schools, hospitality, and multifamily residential projects, test areas no larger than 5,000 square feet (465 square meters). For warehouses or large open spaces in other building types (e.g., ballrooms in hospitality, gymnasiums in schools), a limit of 50,000 square feet (4 654 square meters) may be used))
7. Ensure that the following procedures are followed at all test locations.

    a. The measurement equipment must be positioned in the breathing zone, between 3 and 6 feet (900 and 1 800 millimeters) above the floor.
    b. The test must occur during normal occupied hours, with the HVAC system starting at the normal start time and delivering outdoor air at the minimum rate.
    c. The gravimetric method must be used for testing.

8. Develop an IAQ testing report that includes the following:

4) Certified GS-40 industrial areas
5) CCD 112 or 115 odor control additives
6) Green Seal GS09- paper towel products
7) Green Seal GS01 Toilet Paper Products
8) Recycled Content Trash Bags
9) Vacuum cleaners certified by carpet and rug institute "Green Label" testing program
10) Powered floor maintenance buffers and burnishers must have devices for particle capture
11) Replace all air filters (i.e., pre and final filters) just prior to Substantial Completion.

PART 4 - INDOOR AIR QUALITY ASSESSMENT

4.1 AIR TESTING

A. Indoor Environmental Consultant Qualifications:

1. Contractor shall employ and pay for an Indoor Environmental Consultant to perform specified indoor air quality testing. Owner or Owner's representation shall be present at time of testing.
2. Minimum 5 years' experience in conducting indoor environmental quality evaluations per LEED BD&C requirements.
3. After construction ends and before occupancy, conduct baseline IAQ testing using protocols consistent with the methods listed in the attached Table for all occupied spaces. Use current versions of ASTM standard methods, LEED V4 BD&C Air Testing Requirements, EPA compendium methods, or ISO methods, as indicated. Laboratories that conduct the tests for chemical analysis of formaldehyde and volatile organic compounds must be accredited under ISO/IEC 17025 for the test methods they use.
4. Select testing locations with the least ventilation but the greatest concentration of VOCs and other contaminants. Use current versions of ASTM or ISO methods.
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    b. The test must occur during normal occupied hours, with the HVAC system starting at the normal start time and delivering outdoor air at the minimum rate.
    c. The gravimetric method must be used for testing.

8. Develop an IAQ testing report that includes the following:

a. Narrative describing procedures and how locations were determined
b. Dates and results of each test

9. Conduct all measurements before occupancy but during normal occupied hours, with the building ventilation system started at the normal daily start time and operated at the minimum outdoor airflow rate for the occupied mode throughout the test.
10. Conduct testing prior to Owner occupancy but during normally occupied hours.
11. Operate building HVAC system at normal daily start and stop times at minimum outside airflow for occupied mode for duration of testing.
12. Number of Air Sampling Locations: Minimum of one per 25,000 square feet or for each contiguous floor area, whichever is greater. Include areas with least ventilation and greatest presumed source strength.
13. At each location, collect samples at to 6 feet above floor over minimum 4-hour period.
14. Demonstrate that contaminant concentrations do not exceed following maximum concentration limits:

Contaminant	Maximum Concentration Limit
Carbon Dioxide *	10,300/ventilation rate
Carbon Monoxide	9 ppm and maximum 2 ppm above outdoor levels
Total Volatile Organic Compounds (TVOC)	Maximum 500 micrograms/cubic meter
Formaldehyde	Maximum 27 parts per billion
Target Chemical Listed in CDPH Standard Method v1.1 Table 4-1, Except formaldehyde	CDPH Standard Method v1.1-2010, Allowable Concentrations, Table 4-1
Total Volatile Organic Compounds (TVOC's)	Maximum 500 micrograms/cubic meter
Ozone	Maximum .075 parts per million
Total Particles (PM 10)	Maximum 50 micrograms/cubic meter

* Carbon dioxide monitoring is required only if building is occupied during testing. Ventilation rate is outdoor air requirement per person. Carbon dioxide measurement is differential between indoor and outdoor conditions, based on occupancy type as defined by ANSI/ASHRAE 62.1 and 62.2.

B. For each sampling location where maximum concentration limit is exceeded, report findings and submit a request for a building flush-out with outside air along with flush out procedures. After Flush retest specific contaminant areas until maximum concentration limit is achieved. Collect samples for retesting from original sampling location.

END OF SECTION 01 35 46

SECTION 01 42 00 – REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of the Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 DEFINITIONS

A. General: Basic Contract definitions are included in the General Conditions of the Contract.

B. "Approved": The term "approved," when used in conjunction with the OAR's or Designer(s) action on the Contractor's submittals, applications, and requests, is limited to the OAR's or Designer duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the OAR, requested by the OAR, and similar phrases.

D. "Furnish": The term "furnish" means to supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

E. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on the Drawings; or to other paragraphs or schedules in the Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted", "scheduled," and "specified" are used to help the user locate the reference. Location is not limited.

F. "Install": The term "install" describes operations at the Project site including the actual unloading, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

G. "Installer": An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, who performs a particular activity including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.

H. "Manufacturer": The manufacturer is the individual entity with responsibility for and control of the assembly of the major components.

I. "Project site" is the space available to the Contractor for performing installation activities, either exclusively or in conjunction with others performing work as part of the Project. The extent of the Project site is shown on the Drawings.

J. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.

SECTION 01 42 00 – REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of the Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 DEFINITIONS

A. General: Basic Contract definitions are included in the General Conditions of the Contract.

B. "Approved": The term "approved," when used in conjunction with the OAR's or Designer(s) action on the Contractor's submittals, applications, and requests, is limited to the OAR's or Designer duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the OAR, requested by the OAR, and similar phrases.

D. "Furnish": The term "furnish" means to supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

E. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on the Drawings; or to other paragraphs or schedules in the Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted", "scheduled," and "specified" are used to help the user locate the reference. Location is not limited.

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H. "Manufacturer": The manufacturer is the individual entity with responsibility for and control of the assembly of the major components.

I. "Project site" is the space available to the Contractor for performing installation activities, either exclusively or in conjunction with others performing work as part of the Project. The extent of the Project site is shown on the Drawings.

J. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.

K. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the industry that control performance of the Work.

1. The term "experienced," when used with the term "installer," means having successfully completed a minimum of 5 previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.

L. "Testing Agencies": A testing agency is an independent entity engaged by the Owner, to perform specific inspections or tests, either at the Project site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.3 SPECIFICATION FORMAT AND CONTENT EXPLANATION

A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 6-digit and 50-division "MasterFormat" system.

B. Specification Content: These Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated as the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.
2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.

a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.4 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with the standards in effect as of the date of the Contract Documents, unless otherwise indicated.

C. Conflicting Requirements: Where compliance with 2 or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different but apparently equal to the OAR for a decision before proceeding.

D. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the OAR for a decision before proceeding.

E. Copies of Standards: Each entity engaged in installation on the Project must be familiar with industry standards applicable to its installation activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required installation activity, the Contractor shall obtain copies directly from the publication source and make them available on request.

F. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-generating organization, authorities having jurisdiction, or other entity applicable to the context of the text provision. Refer to Gale Research Inc.'s "Encyclopedia of Associations," which is available in most libraries.

1.5 GOVERNING REGULATIONS AND AUTHORITIES

A. Copies of Regulations: Obtain copies of the current codes and regulations being utilized by the Authority Having Jurisdiction and retain at the Project site to be available for reference by parties who have a reasonable need.

1.6 SUBMITTALS

A. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END CTION 01 42 00

D. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the OAR for a decision before proceeding.

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PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END CTION 01 42 00

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SECTION 01 43 39 - VISUAL MOCK-UP REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section.

1.1 SUMMARY

A. This Section specifies full size mock-up requirements of building components to verify material selections, demonstrate aesthetic effects and review construction and workmanship.

B. Visual Mock-up shall be completed prior to commencement of in-place construction.

C. Approved mock-up shall establish the standard by which the Work will be judged.

D. Acceptance of mock-up does not constitute approval of deviations from the Contract Documents in mock-up, unless such deviations are specifically approved by Architect in writing.

E. Retain mock-ups during construction and maintain in an undisturbed condition. Do not demolish alter or remove mock-up until approved by OAR and Designer.

F. Mock-up shall be used to demonstrate quality of materials, finish and workmanship as well as to show compliance with visual criteria.

G. Submit shop drawings prior to fabrication of visual mock-up, showing plan, elevations and details of mock-up.

PART 2 - PRODUCTS

2.1 MATERIALS

A. As specified in individual Specification Sections.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Use the same workers to do work in conjunction with construction of the mock-up as covered by the work of their respective Contracts.

SECTION 01 43 39 - VISUAL MOCK-UP REQUIREMENTS

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PART 2 - PRODUCTS

2.1 MATERIALS

A. As specified in individual Specification Sections.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Use the same workers to do work in conjunction with construction of the mock-up as covered by the work of their respective Contracts.

B. Provide a 2-Faced mock-up as indicated complete with the following conditions (All conditions shall be finished with details identical to those proposed for use in the building and as indicated on the drawings).

1. Curtainwall System
2. Exterior curtainwall corner
3. Curtainwall head condition
4. Metal Composite Panels
5. Louver Penetration
6. Louver head
7. Roof Edge and Gutter including expansion joints
8. Soffit condition
9. T-flashing transitions
10. Roof section
11. Skylight
12. Inside Corner
13. Splice joints
14. Control joints
15. Backer rod/joint installation
16. Building expansion joints
17. Precast panels
18. Add additional details as needed based on design

C. Do not use special measures or techniques, which are not representative of those to be used in the building. Finish the various components to show the maximum variation that will exist in the actual building construction between adjacent components.

D. Notify OAR when construction of mock-up begins and when major components are to be installed.

E. Complete the mock-up and obtain OAR's and Designer's approval of each component of the mock-up prior to fabrication or purchase of products for the Project.

3.2 BUILDING EXTERIOR WALL

A. Fabricate and erect the above described visual mock-up of the typical exterior wall condition with one outside corner returning to the window line.

B. Mock-up size: As indicated on drawings.

C. Provide structural steel frame work for support of visual mock up. Frame work shall be designed by a registered professional or structural engineer licensed in the State where the Project is located.

D. Coordinate with OAR and Designer for location of mock-up on project site. When directed, demolish mock-ups and remove from Project site.

E. Construct mock-up in such a manner that each type of exterior finishes will be demonstrated in a layered fashion from one side to the other. The purpose in the layers is to facilitate the review of the multiple activities that are required to accomplish the final finish.

F. Construct mock-up in phases so that proposed construction methodologies can be observed. Mock-up shall be completely constructed, just as if it were the finished exterior wall section. Wall insulation and interior wall finishes are not required.

G. In addition to specifics in the respective Specification Sections, the mock-up will be reviewed by the OAR and the Architect for the following evaluation purposes:

1. Aesthetic: To review and verify selections made under submittals, as well as to show compliance with visual criteria. Acceptance criteria is for general and specific aesthetic qualities of construction, and includes, but is not limited to, the following:

   a. Tooling of sealants.
   b. Color consistency of aluminum window framing.
   c. Color and clarity of glass.
   d. Flatness and alignment of aluminum composite material panels.

2. Installation Execution: To review and verify quality of workmanship, and compliance with Drawings, Specification and submittals. Acceptance criteria is for general and specific erection, installation and application qualities of construction, and includes, but is not limited to, the following:

   a. Cold-formed metal framing fabrication and assemblage.
   b. Glazed aluminum wall system fabrication, anchorage/attachment, and installation quality.
   c. Glazing integrity.
   d. Sealant profile consistency and bonding integrity.
   e. Attachment of aluminum composite material panels.
   f. Dimensional tolerances.

3.3 TYPICAL ROOM MOCK-UP

A. Arrange for the construction of a typical room mock-up located in the building, per mutual agreement between OAR and Contractor.

1. Typical Restrooms: At the first installation of a typical public restroom, complete finishes fixtures and accessories in one restroom module as a visual mock-up.

B. The materials trades Subcontractors shall do all work in conjunction with construction of the mock-up as covered by the work of their respective subcontracts.

C. Typical Room mock-up shall be complete with finishes, fixtures and details identical to those proposed for use in the Project. Do not use special measures or techniques, which are not representative of those to be used in the finish work. Finish the various components to show the quality of material and construction that will exist in the actual construction.

D. Typical room mock-up shall be of adequate size to contain all samples and demonstrate quality of materials, finish and workmanship as well as to show compliance with visual criteria. Submit shop drawings to show layout of room prior to construction. Mock-up room shall be constructed as soon as sufficient structure is available to allow installation.

F. Construct mock-up in phases so that proposed construction methodologies can be observed. Mock-up shall be completely constructed, just as if it were the finished exterior wall section. Wall insulation and interior wall finishes are not required.

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D. Typical room mock-up shall be of adequate size to contain all samples and demonstrate quality of materials, finish and workmanship as well as to show compliance with visual criteria. Submit shop drawings to show layout of room prior to construction. Mock-up room shall be constructed as soon as sufficient structure is available to allow installation.

E. Materials or workmanship not approved shall be removed and replaced with acceptable products or workmanship. Fabrication, purchase or installation of materials for the building shall not begin until approved in the mock-up room. OAR's approval of samples will be required on all visual items prior to Contractor's purchase of materials..

F. Materials installed in the room mock-up shall include an example of all furnished assemblies, hardware, equipment or accessories required for the Project and shall include, but may not be necessarily limited to the following:

1. Lavatory countertop, complete with sealant, sink, accessories, trim, etc.
2. Flush Wood veneer door
3. Hollow Metal Door Frame
4. Door Hardware
5. Ceramic floor and wall material
6. Vinyl Wall Covering(s)
7. Toilet Compartment complete with partition, side wall, pilaster, door and hardware.
8. Toilet Room Accessories
9. Water closet and trim
10. Urinal and trim
11. Lighting
12. Electrical Devices and Accessories
13. Access Doors or Panels

END OF SECTION 01 43 39

SECTION 01 45 00 - QUALITY CONTROL

PART 1 - GENERAL

1. 1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification sections, apply to this section.

1. 2 SUMMARY

A. Section includes: quality control and quality assurance services.

1. Quality control services: inspections, tests, and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the OAR and Designer. Unless otherwise specified in the Contract Documents, all quality control services, inspections, tests and related actions shall be coordinated and provided by Contractor.
2. Quality assurance services: Inspection and testing services to assist the OAR and Designer in the determination of compliance of the Work with the Contract Documents. These services will be provided by the Owner but do not relieve the Contractor of responsibility for compliance with Contract Document requirements or for quality control services.

B. Requirements of this Section relate to customized fabrication, on site construction and installation procedures, not production of standard products.

1. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.
2. Requirements to provide quality control services required by the Owner, OAR, Designer, or Authorities Having Jurisdiction are not limited by provisions of this Section.

1. 3 TESTING BY THE OWNER

A. The Owner may engage the services of an independent agency to perform inspections and tests specified as the Owner's responsibilities. The OAR will inform the Contractor of such services.

1. Where the Owner has engaged a testing agency or other entity for testing and inspection of a part of the Work, and the Contract Documents require the Contractor to engage an entity for the same or related element, the Contractor shall not employ the same entity engaged by the Owner, unless otherwise agreed in writing with the Owner.

B. Owner Responsibilities: The Owner may provide inspections, tests and similar quality assurance services to determine whether the Work is in conformance with the requirements of the Contract Documents. Costs for these services are not included in the Contract Price.

EDITOR'S NOTE: Except as noted above, the standard GOAA specifications should not be changed. Designers, however, must not only be made aware of the requirements of Section 01 45 00, but also that

SECTION 01 45 00 - QUALITY CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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1. Quality control services: inspections, tests, and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the OAR and Designer. Unless otherwise specified in the Contract Documents, all quality control services, inspections, tests and related actions shall be coordinated and provided by Contractor.
2. Quality assurance services: Inspection and testing services to assist the OAR and Designer in the determination of compliance of the Work with the Contract Documents. These services will be provided by the Owner but do not relieve the Contractor of responsibility for compliance with Contract Document requirements or for quality control services.

B. Requirements of this Section relate to customized fabrication, on site construction and installation procedures, not production of standard products.

1. Inspections, test and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with Contract Document requirements.
2. Requirements to provide quality control services required by the Owner, OAR, Designer, or Authorities Having Jurisdiction are not limited by provisions of this Section.

1.3 TESTING BY THE OWNER

A. The Owner may engage the services of an independent agency to perform inspections and tests specified as the Owner's responsibilities. The OAR will inform the Contractor of such services.

1. Where the Owner has engaged a testing agency or other entity for testing and inspection of a part of the Work, and the Contract Documents require the Contractor to engage an entity for the same or related element, the Contractor shall not employ the same entity engaged by the Owner, unless otherwise agreed in writing with the Owner.

B. Owner Responsibilities: The Owner may provide inspections, tests and similar quality assurance services to determine whether the Work is in conformance with the requirements of the Contract Documents. Costs for these services are not included in the Contract Price.

EDITOR'S NOTE: Except as noted above, the standard GOAA specifications should not be changed. Designers, however, must not only be made aware of the requirements of Section 01 45 00, but also that

it is their prerogative to modify the specifications when necessary, based upon specific project requirements, to identify specific testing and inspection which the Owner should perform.

1. The Owner may employ and pay for the services of an independent agency, testing laboratory or other qualified firm to perform acceptance and quality assurance testing.
2. The Owner may employ threshold inspection services.

1.4 CONTRACTOR RESPONSIBILITIES

A. Contractor Responsibilities: Provide inspections, tests and similar quality control services, specified in individual specification sections and required by governing authorities, except where they are specifically indicated to be the Owner's responsibility, or are provided by another identified entity. Costs for these services shall be included in the Contract Price.

1. Testing Agency: Employ and pay an independent agency, to perform specified quality control services.
2. Re-testing: Provide the cost of re-testing where results of required inspections, tests or similar services prove non-compliance with Contract Document requirements.

    a. Provide the cost of re-testing construction revised or replaced.

3. Associated Services: Cooperate with the OAR and with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the OAR and the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but are not limited to the following:

    a. Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests.
    b. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
    c. Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.
    d. Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
    e. Security and protection of samples and test equipment at the Project site.

B. Duties of the Testing Agency: The independent testing agency engaged by the Contractor to perform inspections, sampling and testing of materials and construction specified in individual Specification Sections shall cooperate with the OAR, Designer and Contractor in performance of its duties, and shall provide qualified personnel to perform required inspections and tests.

1. The agency shall notify the OAR, Designer and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. The agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.
3. The agency shall not perform any duties of the Contractor.

C. Coordination: The Contractor and each agency engaged by the Contractor to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required

services with a minimum of delay. In addition, coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

1. Schedule times for inspections, tests, taking samples, and similar activities. Provide a minimum of one (1) day (excluding weekends and holidays) notification to the OAR and Designer for each inspection, test, sampling, and similar activities.

1.5 SUBMITTALS

A. The independent testing agency shall submit two (2) certified copies and PDF on a CD of the written report of each inspection, test or similar service, to the OAR unless the Contractor is responsible for the service. If the Contractor is responsible for the service, submit four (4) certified copies and PDF on a CD of the written report of each inspection, test or similar service through the Contractor to the OAR. The PDF file shall be enabled for Adobe Reader's Comment and Markup functionality. All stamps and markings described herein shall be electronically duplicated.

1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.
2. Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to:

   a. Date of issue.
   b. Project title and number.
   c. Name, address and telephone number of testing agency.
   d. Dates and locations of samples, tests, and inspections.
   e. Names of individuals making the inspection or test.
   f. Designation of the Work and test method.
   g. Identification of product and Specification Section.
   h. Complete inspection or test data.
   i. Test results and interpretations of test results.
   j. Ambient conditions at the time of sample-taking and testing.
   k. Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements.
   l. Name and signature of laboratory inspector.
   m. Recommendations on re-testing.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching."

services with a minimum of delay. In addition, coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

1. Schedule times for inspections, tests, taking samples, and similar activities. Provide a minimum of one (1) day (excluding weekends and holidays) notification to the OAR and Designer for each inspection, test, sampling, and similar activities.

1. 5 SUBMITTALS

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1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.
2. Report Data: Written reports of each inspection, test or similar service shall include, but not be limited to:

   a. Date of issue.
   b. Project title and number.
   c. Name, address and telephone number of testing agency.
   d. Dates and locations of samples, tests, and inspections.
   e. Names of individuals making the inspection or test.
   f. Designation of the Work and test method.
   g. Identification of product and Specification Section.
   h. Complete inspection or test data.
   i. Test results and interpretations of test results.
   j. Ambient conditions at the time of sample-taking and testing.
   k. Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements.
   l. Name and signature of laboratory inspector.
   m. Recommendations on re-testing.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching."

1. Remove all deficient Work and replace it with Work of specified quality, or take such other corrective action as the OAR and Designer may direct. No increase will be made in the Contract Sum or in Contract Time as a result of authorizing a change in methods or equipment under this Article.

B. Protect construction exposed for quality control services.

END OF SECTION 01 45 00

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of the Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, maintenance of traffic, security and protection.

B. Temporary utilities which may be required include but are not limited to:

1. Temporary electric power and light.
2. Telephone service.
3. Temporary project identification sign - all other signs are prohibited.
4. Drinking water.
5. Sanitary facilities.

C. Temporary construction and support facilities which may be required include but are not limited to:

1. Storage sheds.
2. Dewatering facilities and drains.
3. Temporary enclosures including demising walls.
4. Waste disposal services.
5. Construction aids and miscellaneous services and facilities.
6. Storm and sanitary sewer.
7. Fuel tanks larger than 15 gallons.
8. Temporary Wayfinding Signage.
9. Designated smoking areas and applicable signage.

D. Temporary construction and support facilities, Contractor's option:

1. Field office.

EDITOR'S NOTE: Select One.

a. Temporary field offices (WILL) (WILL NOT) be allowed on the construction site.

EDITOR'S NOTE: Specify Location.

b. If a field office is used it shall be located at (insert location)

E. Security and protection facilities which may be required include but are not limited to:

1. Temporary fire protection.

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of the Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, maintenance of traffic, security and protection.

B. Temporary utilities which may be required include but are not limited to:

1. Temporary electric power and light.
2. Telephone service.
3. Temporary project identification sign - all other signs are prohibited.
4. Drinking water.
5. Sanitary facilities.

C. Temporary construction and support facilities which may be required include but are not limited to:

1. Storage sheds.
2. Dewatering facilities and drains.
3. Temporary enclosures including demising walls.
4. Waste disposal services.
5. Construction aids and miscellaneous services and facilities.
6. Storm and sanitary sewer.
7. Fuel tanks larger than 15 gallons.
8. Temporary Wayfinding Signage.
9. Designated smoking areas and applicable signage.

D. Temporary construction and support facilities, Contractor's option:

1. Field office.

EDITOR'S NOTE: Select One.

a. Temporary field offices (WILL) (WILL NOT) be allowed on the construction site.

EDITOR'S NOTE: Specify Location.

b. If a field office is used it shall be located at (insert location)

E. Security and protection facilities which may be required include but are not limited to:

1. Temporary fire protection.

2. Barricades, warning signs, lights.
3. Sidewalk bridge or enclosure fence for the site.
4. Environmental protection.

1.3 SUBMITTALS

A. Temporary Utilities: Maintain reports of tests, inspections, meter readings and similar procedures performed on temporary utilities for review by the OAR.

B. Implementation and Termination Schedule: Show implementation and termination of temporary utilities in the baseline schedule required by Section 01 32 13 Scheduling of Work.

C. Maintenance of Traffic Plan: Submit a "Maintenance of Traffic Plan" within fourteen (14) days of the date established for commencement of work requiring the maintenance of traffic.

EDITOR'S NOTE: Demising wall plan may be deleted if not required by GOAA.

D. Demising Wall Plan: Submit a plan at the pre-construction meeting indicating the location, construction, and extent of demising walls. Include connection details indicating method of installation, attachment, etc.

E. Temporary Project Identification Sign: Submit complete shop drawings identifying locations, material, layout, sign content, font type and size, and sample colors. Make sign and lettering to scale, clearly indicating condensed lettering if used. The sign details will be submitted to GOAA Planning – Signage Team for approval prior to fabrication. Submit method of erection to include materials, fasteners, and other items to assure compliance with the requirements for wind pressures / speed as required by the authorities having jurisdiction. Submit signs in accordance with any details provided in the drawings as shown on standard detail drawing at the end of this section (Construction Sign Detail).

1.4 QUALITY ASSURANCE

A. Regulations: Comply with industry standards and applicable laws and regulations of Authorities Having Jurisdiction, including but not limited to:

1. Building Code requirements.
2. Health and safety regulations.
3. Utility company regulations.
4. Environmental protection regulations.

B. Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations," ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."

1. Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", prepared jointly by AGC and ASC, for industry recommendations.
2. Electrical Service: Comply with NEMA, NECA and UL standards and regulations for temporary electric service. Install service in compliance with National Electric Code (NFPA 70).

C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

A. Temporary Utilities: Include in the project schedule dates for implementation and termination of each temporary utility. Coordinate with the OAR change over from use of temporary service to use of the permanent service.

B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.

C. HVAC Shut-down: Coordinate with the OAR concerning shut-down of HVAC and return air systems in Project work areas.

1. In addition to the installation of demising walls, and providing air filtration specified, shut-down the return air systems in each area where construction / demolition activities are underway. Re-establish the return air systems when work has been completed.
2. Provide temporary HVAC systems to maintain the existing level of service during the shutdown period.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Where visible to the public, provide new materials suitable for the use intended. Where not visible to the public, Contractor may provide undamaged previously used materials, suitable for the use intended. Demising walls may be moved and re-used only at the discretion of the OAR; the condition of the materials must be like new.

B. Lumber and Plywood: Comply with requirements in Division-6 Section "Rough Carpentry."

C. Tarpaulins: Provide waterproof, fire-resistant, UL labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures provide translucent nylon reinforced laminated polyethylene or polyvinyl chloride fire retardant tarpaulins.

D. Water: Provide potable water meeting the requirement of the local health authorities.

2.2 EQUIPMENT

A. General: Provide new equipment or previously used equipment in serviceable condition suitable for use intended.

B. Electrical Outlets: Provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.

C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

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C. Electrical Power Cords: Provide grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas where construction activities are in progress. Eliminate trip hazards.

D. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.

E. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel being consumed.

F. Temporary Toilet Units: Provide self-contained single-occupant toilet units of the chemical type, properly vented and fully enclosed with a glass fiber reinforced polyester 2`shell.

G. First Aid Supplies: Comply with governing regulations.

1. Fire Extinguishers: Provide hand-carried, portable UL-rated, class "A" fire extinguishers for temporary offices and similar spaces. In other locations provide hand-carried, portable, UL-rated, class "ABC" dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classes for the exposures.
2. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Use qualified personnel for installation of temporary facilities. Comply with all applicable codes. Relocate and modify facilities as required.

3.2 TEMPORARY UTILITY INSTALLATION

A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment; comply with the company's recommendations.

1. Arrange with the utility company and the OAR for a time when service can be interrupted, where necessary, to make connections for temporary services.
2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
3. Cost or use charges for temporary facilities are not chargeable to the Owner, OAR or the Designer, and will not be accepted as a basis of claims for a Change Order.

A. Water Service: Install water service and distribution piping of sizes and pressures adequate for construction.

1. Provide a backflow prevention device.

A. Temporary Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period.

B. Temporary Lighting: Whenever overhead floor or roof deck has been installed, provide temporary lighting with local switching.

1. Install and operate temporary lighting that will fulfill security and protection requirements, without operating the entire system, and will provide adequate illumination for construction operations and traffic conditions.

C. Temporary Telephones: Provide temporary telephone service for personnel engaged in construction activities, throughout the construction period.

3.3 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION

A. General: Locate field offices, storage sheds, sanitary facilities and other temporary construction and support facilities as indicated.

1. Maintain temporary construction and support facilities until near Final Acceptance. Remove prior to Final Acceptance. Personnel remaining after removal will be permitted to use permanent facilities, under conditions acceptable to the OAR.
2. Provide non-combustible construction for offices, shops and sheds located within the construction area, or within 30 feet of building lines. Comply with requirements of NFPA 241.

B. Temporary Heat: Provide temporary heat required by construction activities, for curing or drying of completed installations or protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.

C. Heating Facilities: Except where use of the permanent system is authorized, provide vented self-contained LP gas or fuel oil heaters with individual space thermostatic control.

D. Use of gasoline-burning space heaters, open flame, or salamander type heating units is prohibited.

E. Storage and Fabrication Sheds: Install storage and fabrication sheds, sized, furnished and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces within the building or elsewhere on the site.

F. Sanitary Facilities: Sanitary facilities include temporary toilets, wash facilities and drinking water fixtures. Comply with local health authorities for the administration of these facilities.

1. Provide toilet tissue, paper towels, paper cups and similar disposable materials for each facility. Provide covered waste containers for used material.
2. Temporary Toilets shall be self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.
3. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition. Dispose of drainage properly. Supply cleaning compounds appropriate for each condition.

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3. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition. Dispose of drainage properly. Supply cleaning compounds appropriate for each condition.

4. Drinking Water Accommodations: Provide drinking water accommodations as necessary, including paper supply.

G. Dewatering Facilities and Drains: For temporary drainage and dewatering facilities and operations not directly associated with construction activities included under individual Sections, comply with dewatering requirements of applicable Division 2 Sections. Where feasible, utilize the same facilities. Maintain the site, excavations and construction free of water.

H. Temporary Enclosures - Demising Walls: Provide temporary enclosure for protection of construction in progress from public view and foul weather.

1. General: Demising walls, for all interior locations, shall be Type A; demising walls, for all exterior locations, shall be Type B. Walls shall be, as specified below, and shall be constructed to keep public areas TOTALLY free from dust and debris, and to maintain separation between the construction and public areas, and to prevent visual observation of the construction.

   a. DO NOT MECHANICALLY FASTEN DEMISING WALL FRAMING MEMBERS TO EXISTING CONSTRUCTION (CONCRETE SLAB, CONCRETE WALKS, WALLS, ETC.). Design, brace, and support walls as required to provide protection necessary.
   b. INTERIOR DEMISING WALLS SHALL BE CONSTRUCTED TO COMPLETELY SEAL THE RETURN AIR PLENUM AREAS FROM THE CONSTRUCTION AREAS. INSTALL INTERIOR DEMISING WALLS TO UNDERSIDE OF SLAB AND SEAL AIR-TIGHT.
   c. Type A: Construct walls with metal studs, structurally sound, properly braced, and not more than 24-inches on center. The studs shall be covered with a minimum one-half-inch Type X gypsum drywall. Bracing shall be installed in a manner that minimizes the damage to the finishes existing or proposed. The gypsum drywall shall be constructed and finished in accordance with Section 09 21 16, Gypsum Board Assemblies. Install a 1" x 6" high painted wood base the full length of the demising wall and painted with Color matched to M.A. Bruder #131, Pelican White.

2. Unless otherwise indicated, install a 6 mil thick (minimum thickness) polyethylene (visqueen) sheet around the entire perimeter of the demising wall from the underside of the deck above to the top of the wall. The polyethylene sheet shall be installed in a manner to assure the public is not affected by the construction activities.
3. Provide air filtration, as required, for all interior work areas for TOTAL DUST CONTROL. Locate filtration equipment inside the construction area and within the demising wall perimeters. Provide equipment to prevent dust from migrating into occupied areas. PROVIDE ADDITIONAL FILTRATION UNITS IF RESULTING DUST LEVELS ARE NOT ACCEPTABLE TO THE OAR.

   a. Type B: Construct with wood studs, structurally sound, properly braced, and not more than 24-inches on center. The studs shall be covered with a minimum one-half-inch thick plywood, APA Grade B-C, Exterior, standard 4-foot x 8-foot nominal in size. Place plywood with the "B" side facing the public and the 8-foot dimension vertical from the floor.

4. Unless otherwise indicated, install a 6 mil thick (minimum thickness) polyethylene (visqueen) sheet around the entire perimeter of the demising wall from the underside of the deck above to the top of the wall. The polyethylene sheet shall be installed in a manner to assure the public is not affected by the construction activities.

5. Provide air filtration, as required, for all interior work areas for TOTAL DUST CONTROL. Locate filtration equipment inside the construction area and within the demising wall perimeters. Provide equipment to prevent dust from migrating into occupied areas. PROVIDE ADDITIONAL FILTRATION UNITS IF RESULTING DUST LEVELS ARE NOT ACCEPTABLE TO THE OWNER.

    a. Paint demising walls for color match to M.A. Bruder #131 Pelican white.
    b. Provide access door with lockset, and automatic closing device. Lockset shall be Russwin/Corbin mortise or cylindrical type, with large format removable cores, in compliance with the Owner's standards. All locks shall be keyed by the Owner's locksmith, (407) 825-2565, to allow emergency access by the Owner to all construction areas.

6. Paint door and frame to match the wall color specified.
7. Temporary Heat: Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.

I. Temporary Lifts and Hoists: Provide facilities for hoisting materials, if required.

J. Existing Elevator Use: Use of existing public elevators is NOT ALLOWED by construction personnel during the duration of this Project.

K. Temporary Project Identification Sign /Construction Company Identification Sign: Contractor shall furnish, install and maintain all sign materials including sign posts, weighted stands, brackets, any required mounting hardware and miscellaneous materials required for temporary project identification signs as required by location. Prepare project identification sign of the size indicated; install sign where indicated to inform the public and persons seeking entrance to the Project. Securely attach, as required, to demising wall. Install sign at commencement of construction and remove upon issuance of the Certificate of Occupancy/Certificate of Completion (CofO).

1. Size:

    a. Exterior: Four by Six feet(4' x 6') landscape orientation utilizing provided template within this section.
    b. Interior: Eleven by seventeen inches (11" x 17") portrait orientation utilizing provided template within this section..

2. Materials for exterior signage:

    a. Structure and Framing: New construciton grade lumber, structurally adequate and suitable for exterior application and specified finish.
    b. Sign Panels: New A-B Grade, exterior type. APA MDO plywood both sides. Thickness as required by standards to span framimg members, to provide even, smooth surface without waves or buckles, minimum 3/4 inch.

3. Materials for interior signage:

    a. 11" x 17" paper, Ledger size, 28 lb. paper, 100 Bright min., inserted into 11" x 17" clear vinyl sheet protector, adhesdive backing, installed on demising wall.

5. Provide air filtration, as required, for all interior work areas for TOTAL DUST CONTROL. Locate filtration equipment inside the construction area and within the demising wall perimeters. Provide equipment to prevent dust from migrating into occupied areas. PROVIDE ADDITIONAL FILTRATION UNITS IF RESULTING DUST LEVELS ARE NOT ACCEPTABLE TO THE OWNER.

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2. Materials for exterior signage:

    a. Structure and Framing: New construciton grade lumber, structurally adequate and suitable for exterior application and specified finish.
    b. Sign Panels: New A-B Grade, exterior type. APA MDO plywood both sides. Thickness as required by standards to span framimg members, to provide even, smooth surface without waves or buckles, minimum 3/4 inch.

3. Materials for interior signage:

    a. 11" x 17" paper, Ledger size, 28 lb. paper, 100 Bright min., inserted into 11" x 17" clear vinyl sheet protector, adhesdive backing, installed on demising wall.

4. Rough Hardware for exterior signage: Galvanized steel, of sizes and types to enable sign assemblies to resist wind loads as required by authorities having jurisdiction but not less than wind velocity of 50 mph. Use minimum 1/2 inch diameter button head carriage bolts to fasten sign panels to supporting structures or #10 x 3.5" zinc wood screw spaced at 10" to center of pole. Bolt heads to be painted to match sign face.
5. Paint: Exterior quality, as specified in Division 9 or as a minimum as specified herein.

    a. Primer and finish coat: exterior, semi-gloss, enamel.
    b. Colors for structure, framing, back of sign: white.

6. Quality Assurance: Engage an experienced sign painter, or company to apply graphics.
7. Graphic Description: Information shall include at a minimum, the Project Name, Project Number, Owner, Contractor, and Designer name and logo, and completion date. Utilize standard detail drawing template on subsequent pages (Construction Sign Detail).

    a. Type Style: Frutiger 55 Roman
    b. Color: Provide per standard detail drawing template at the end of this section.
    c. Quantity: One sign per project.
    d. Project Identification sign design to be reviewed by GOAA Sigange Team prior to fabrication and installation.

8. Install sign at a heaight for optimum visibility, on ground mounted poles or attached to temporary structural surfaces.
9. Erect the sign on the site at a lighted location of high public visibility, adjacent to main entrance to site or project, as approved by the OAR. The sign must be located 5-feet from the right-of-way and 20-feet from all property lines.
10. Maintain signs and supports in a neat, clean condition; repair damages to structure, framing, or sign.

L. Pardon our dust sign may be provided via the Owner's sign shop. Coordinate request through GOAA Signage Team Project Manager.

M. Collection and Disposal of Waste: Collect waste from construction areas daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80 degrees F (27 degrees C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

1. The Contractor shall not use the Owner's waste disposal systems.
2. The Owner will not provide waste disposal services.

N. Fuel tanks larger than 15 gallons

1. All Equipment

    a. The Contractor will follow the guidance provided with regard to all equipment used on the work site. All equipment with Aboveground Storage Tanks (AST's) fuel tanks that have a capacity of 15 gallons or more but less than 550 gallons will adhere to the following guidelines. Equipment with tanks that have a capacity of 550 and more gallons will adhere to Florida Administrative Code 62-761.

b. Each piece of equipment with a tank capacity of 15 gallons or more will be required to have secondary containment. The capacity of the secondary containment will be 110% of the tank. As a minimum, five sheets of 10-mil visqueen will be used to line the secondary containment. The visqueen will overlap the outside walls of the secondary containment a minimum of 24 inches. The Owner recommends a single sheet of puncture resistant neoprene of ¼ inch thick as a liner in the secondary containment or concrete containment.
c. The secondary containment will be checked on a periodic basis and the fluid buildup will be disposed accordingly. Visible sheen will indicate contaminated water and will be disposed on in accordance with Florida Administrative Code (FAC) 62-777.
d. Mobile storage tanks that meet the criteria of FAC 62-677 are exempt from these procedures.

O. Temporary Wayfinding Signage

1. Provide temporary signs as required to maintain proper airport operations during all aspects of the Work.
2. Provide temporary signage that duplicates any removed or hidden permanent signs as a result of the Work.
3. Coordinate all temporary signs with the OAR and GOAA Planning Signage Team. Develop a temporary sign plan for review by the OAR and GOAA Planning Signage Team. At a minimum, the plan shall show where all temporary signs are to be located, the messages that are to appear, when the signs will be installed, how the signs will be installed, , when the signs will be removed, the sign face layouts, the sign colors, and the materials to be used.
4. Temporary signs shall be safely and securely installed. Repair any damage to any walls, building surfaces, or building finishes resulting from the installation or the removal of the temporary signs. Once they have been taken down, remove from the site and properly dispose of the temporary signs.
5. Coordinate the installation and removal of the temporary signs with the OAR. Also coordinate the installation and removal of the temporary signs with the Project phases and construction progress.

P. Designated Smoking Areas and Applicable Signage

1. Smoking shall be prohibited throughout the project/construction site with exception of designated areas. "No Smoking" signs shall be conspicuously posted at all entrances and throughout the site. See attached template at the end of this section.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. General: Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer as requested by the OAR.

B. Temporary Fire Protection: Install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers," and NFPA 241 "Standard for Safeguarding Construction, Alterations and Demolition Operations."

1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.

b. Each piece of equipment with a tank capacity of 15 gallons or more will be required to have secondary containment. The capacity of the secondary containment will be 110% of the tank. As a minimum, five sheets of 10-mil visqueen will be used to line the secondary containment. The visqueen will overlap the outside walls of the secondary containment a minimum of 24 inches. The Owner recommends a single sheet of puncture resistant neoprene of ¼ inch thick as a liner in the secondary containment or concrete containment.
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1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.

2. Store combustible materials in containers in fire-safe locations.
3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, exitways and other access routes for fighting fires.
4. Provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.

C. Barricades, Warning Signs and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.

D. Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result. Avoid use of tools and equipment which produce harmful noise. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.5 OPERATION, TERMINATION AND REMOVAL

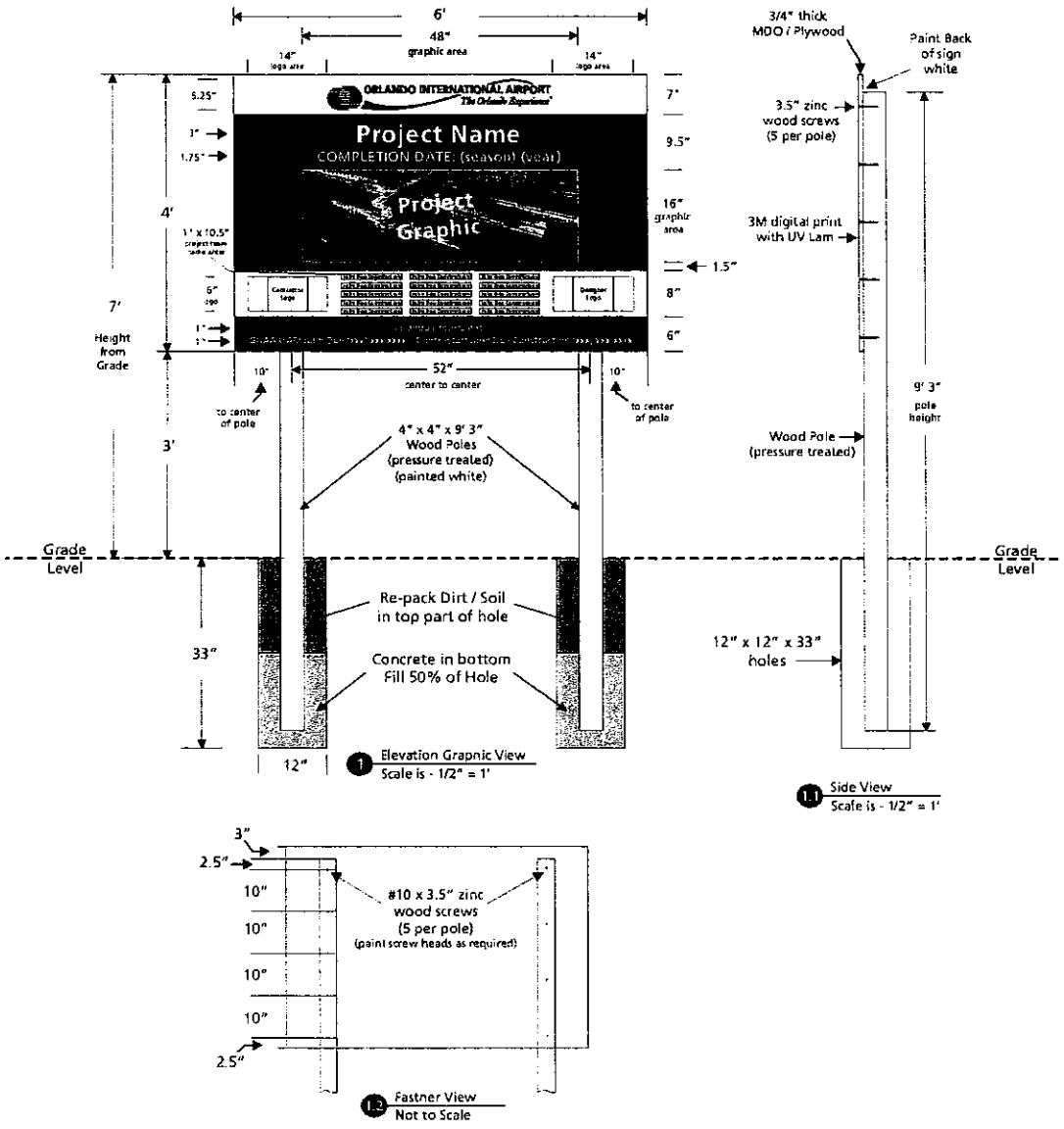
A. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by the elements.

B. Termination and Removal: Unless the OAR requests that it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Final Acceptance. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of the Contractor.
2. Prior to Final Acceptance, clean and renovate permanent facilities that have been used during the construction period, including but not limited to:

    a. Repair of any and all damages to existing materials or finishes. Repair shall be complete and made to the satisfaction of the OAR at no additional cost.
    b. Replace air filters and clean inside of ductwork and housings.
    c. Replace existing significantly work parts and parts that have been subject to unusual operating conditions due to the Work.
    d. Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

Greater Orlando Aviation Authority — **Construction Project Sign Detail (exterior)**



Notes

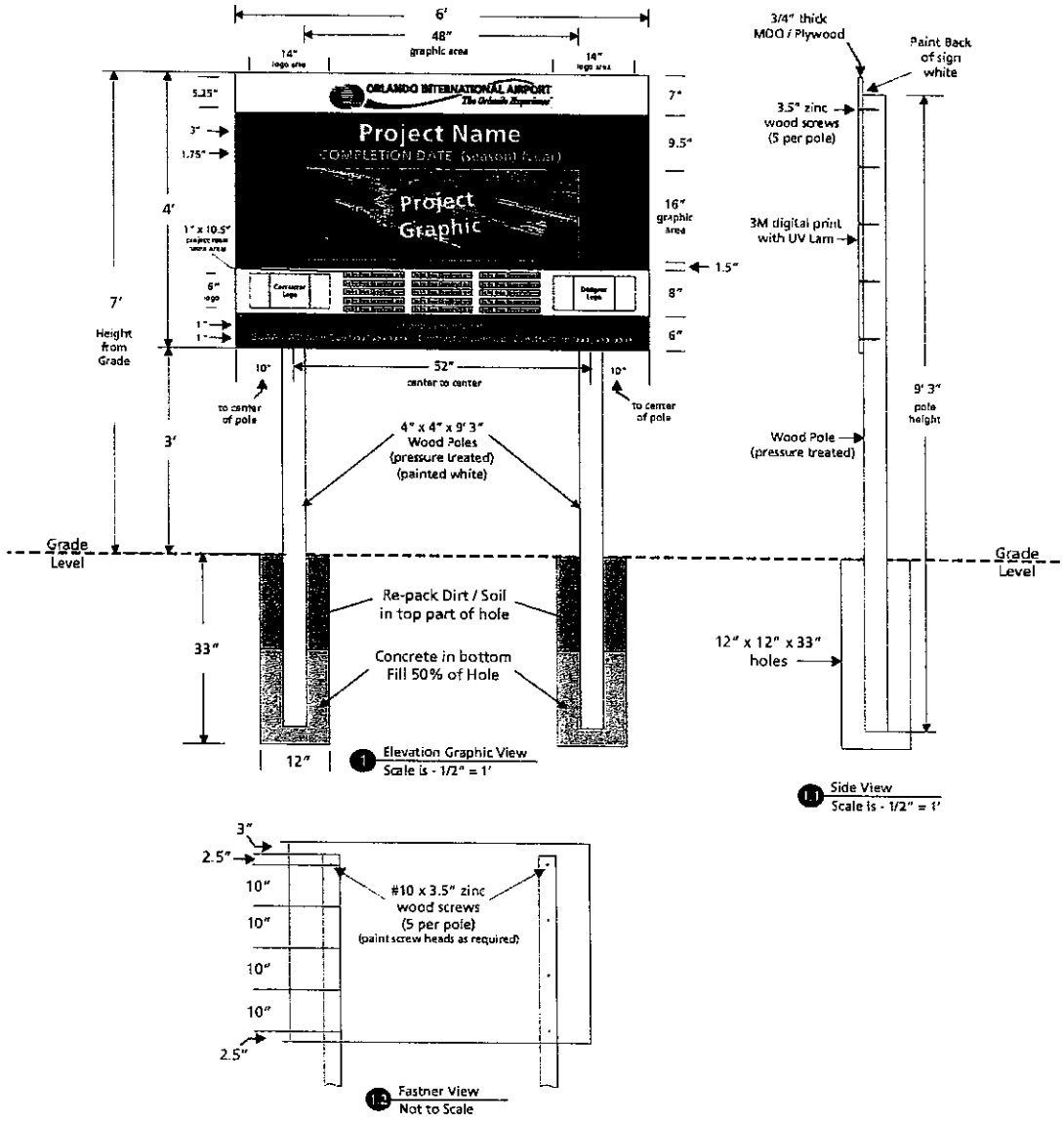
1. Frutiger font family as required. (14.5% L.S. & 120% W.S.)
2. Project name height may vary depending on length.
3. Project graphic size may vary in width per project.
4. Project team names may vary slightly with longer names.
5. Foundation to only have 50% concrete for removal purposes due to weather emergencies.

Colors

GOAA Blue PMS 3025 C	White	Project Graonic	3M 1170 Clear

3M Digital Printed Graonics

Greater Orlando Aviation Authority — **Construction Project Sign Detail (exterior)**



Notes

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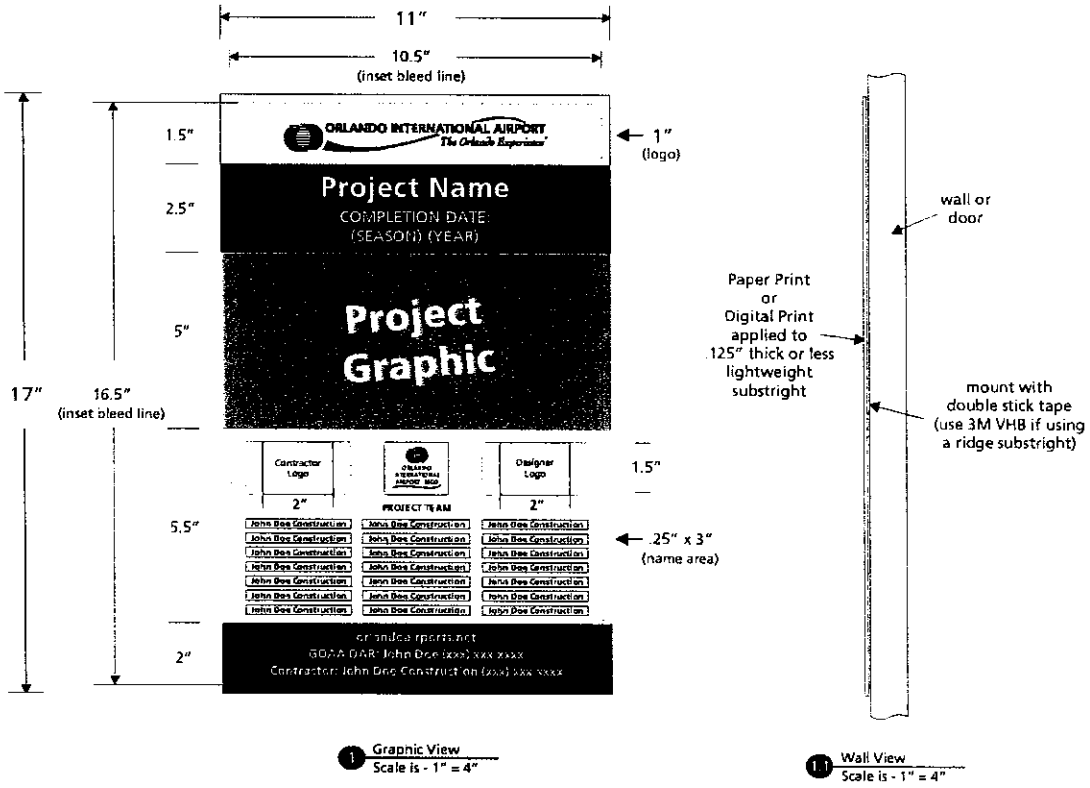
3. Project graphic size may vary in width per project.
4. Project team names may vary slightly with longer names.
5. Foundation to only have 50% concrete for removal purposes due to weather emergencies.

Colors

GOAA Blue PMS 3025 C	White	Project Graphic	3M 1170 Clear

3M Digital Printed Graphics

Greater Orlando Aviation Authority — **Construction Project Sign Detail (interior)**



Notes

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2. Project name height varies depending on length.
3. Project graphic size may vary in size per project.
4. Project team names may vary slightly with longer names.

Colors

GOAA Blue PMS 3025 C	White	Project Graphic	3M 1170 Clear

3M Digital Printed Graphics

END OF SECTION 01 50 00

END OF SECTION 01 50 00

SECTION 01 55 30 - REQUIREMENTS FOR USE OF CANAL ROAD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section. Refer to Specification Section 01 50 00 Temporary Facilities and Controls for additional requirements applicable to the use of lots on Canal Road.

1.2 DESCRIPTION

A. General: The following information indicates requirements for use of the Canal Road (Contractor's Row) staging area, and the requirements for employee (workers) parking. The Contractor shall notify the OAR at the pre-construction meeting for the need to be assigned a Canal Road staging area. The Contractor shall notify the OAR at the Pre-construction meeting for the need to park vehicles at the Project site or the Owners Parking structures.

1. All staging lot sites are marked on the roadway with site numbers. Each staging lot is approximately 75 feet wide, as measured along the roadway. Only one lot will be issued per Contractor, unless expressly approved by the OAR in advance. Lot locations will be determined on the need for available utilities.

    a. If utilities will be required at the lot site,

        1) an address request form is requested from the OAR,
        2) Contact the OAR to review the lots available. Once a lot has been selected, fill out the address request form with the lot number and submit it to the OAR, The request will be coordinated with the Owner's Planning Department and an address assigned. This address assignment is necessary in order for the Contractor to arrange for utilitiy hook-ups.
        3) The Contractor will take the completed address request form and Owner's Canal road site map to the City of Orlando for temporary contruction/trailer permit applications.

    b. If utlities will not be required at the lot site,

        1) contact the OAR for lot assignment.

2. Address is as follows: 6100 Canal Road, Orlando, FL 32827; Site Number: TO BE DETERMINED.
3. All trailers are to be located no less than 20 feet from Canal Road and oriented perpendicular to the road unless otherwise approved by the Owner. Trailers shall be a minimum of 25 feet setback to the rear of the lot.

    a. The Contractor's name, local contact person, Owner/Principal, and telephone number shall be clearly marked on weatherproof placards attached to each trailer. All names/numbers on the placards shall be visible and readable from Canal Road.

b. Office trailers, storage trailers, storage boxes, etc. shall be tied down in accordance with the Florida Department of Highway Safety and Motor Vehicles, Division of Motor Vehicles, Chapter 15C-1.

1. Vehicles associated with this project will be permitted to park between Canal Road and the canal. Canal Road must be kept clear for emergency vehicle access at all times. The Contractor is fully responsible for safety and security of personnel, vehicles and equipment.
2. Materials stored at trailer sites shall be located within lot limits. Chain link security fences may be erected at the trailer site. Fences shall be approved by the OAR.
3. Utility service exists as follows:

   a. Non-Potable water and electric service is limited in service area. The Contractor may extend service at its own expense and is responsible for hook-up of non-potable water and electric service. The Owner does not provide this service.
   b. Telephone may be provided by AT+T for direct connections or Owner's telcommunications for airport system connection at the Contractor's expense.
   c. Electric service will require the Contractor to provide a service pole.

4. No vehicle equipment maintenance activities will be allowed on the Owner's property.
5. Above ground petroleum refueling tanks will be allowed under 500 gallons with the Owner's express permission. See Specification Section 01 50 00 Temporary Facilities and Controls for further requirements.
6. All storage facilities for flammable substances, and hazardous substances must be approved by the Owner's Fire Department and the City of Orlando as required by code.
7. Remove all construction materials and environmentally contaminated soils. Restore the area to a clean, erosion-free area upon leaving.

   a. Keep grass and weeds cut, and trash and loose debris removed.
   b. Any lots not kept in a neat condition will be maintained by the Owner and the Contractor will be backcharged for these costs.

8. All waste shall be properly disposed of off the Owner's property.
9. Provide human waste holding and disposal off site. Only on-site holding tanks, installed per codes, will be allowed. Maintain tanks at regular intervals throughout the Work.
10. All lots will be provided in an "as-is" condition. Leave the site as stated in Paragraph 10 above, regardless of the prior condition of the site.
11. Worker vehicle parking area (between the road and the canal) must be kept in a manner that the Owner may mow and maintain at all times.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 55 30

b. Office trailers, storage trailers, storage boxes, etc. shall be tied down in accordance with the Florida Department of Highway Safety and Motor Vehicles, Division of Motor Vehicles, Chapter 15C-1.

1. Vehicles associated with this project will be permitted to park between Canal Road and the canal. Canal Road must be kept clear for emergency vehicle access at all times. The Contractor is fully responsible for safety and security of personnel, vehicles and equipment.
2. Materials stored at trailer sites shall be located within lot limits. Chain link security fences may be erected at the trailer site. Fences shall be approved by the OAR.
3. Utility service exists as follows:

   a. Non-Potable water and electric service is limited in service area. The Contractor may extend service at its own expense and is responsible for hook-up of non-potable water and electric service. The Owner does not provide this service.
   b. Telephone may be provided by AT+T for direct connections or Owner's telcommunications for airport system connection at the Contractor's expense.
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   a. Keep grass and weeds cut, and trash and loose debris removed.
   b. Any lots not kept in a neat condition will be maintained by the Owner and the Contractor will be backcharged for these costs.

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11. Worker vehicle parking area (between the road and the canal) must be kept in a manner that the Owner may mow and maintain at all times.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 55 30

SECTION SECTION 01 60 00 – PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of the Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project.

1.3 DEFINITIONS

A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.

1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

    a. "Named Products" are items identified by the manufacturer's product name, including make or model number or other designation, shown or listed in the manufacturer's published product literature, that is current as of the date of the Contract Documents.
    b. "Foreign Products," as distinguished from "domestic products," are items substantially manufactured (50 percent or more of value) outside the United States and its possessions. Products produced or supplied by entities substantially owned (more than 50 percent) by persons who are not citizens of, nor living within, the United States and its possessions are also considered to be foreign products.

2. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

1.4 SUBMITTALS

A. Product List: Prepare a list of specified products. Include the manufacturer's name and proprietary product names for each item listed.

B. Coordinate product list with the Contractor's Construction Schedule and the Schedule of Submittals.

C. Form: Prepare product list with information on each item tabulated under the following column headings:

1. Related Specification Section number.
2. Generic name used in Contract Documents.
3. Proprietary name, model number, and similar designations.
4. Manufacturer's name and address.
5. Supplier's name and address.
6. Installer's name and address.
7. Projected delivery date or time span of delivery period.

D. Submit list following procedures and requirements as outlined in Division 1 Specifications Section Shop Drawings, Product Data, and Samples.

1.5 QUALITY CONTROL

A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.

1. When specified products are available only from sources that do not, or cannot, produce a quantity adequate to complete project requirements in a timely manner, consult with the OAR to determine the most important product qualities before proceeding.

2. Qualities may include attributes, such as visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources producing products that possess these qualities, to the fullest extent possible.

B. Compatibility of Options: When the Contractor is given the option of selecting between 2 or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

1. The Contractor is responsible for providing products and construction methods that are compatible with products and construction methods of the subcontractors.

2. If a dispute arises over concurrently selectable, but incompatible products, the OAR will determine which products shall be retained and which are incompatible and must be replaced.

C. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.

D. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.

1. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface that is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:

a. Name of product and manufacturer.

C. Form: Prepare product list with information on each item tabulated under the following column headings:

1. Related Specification Section number.
2. Generic name used in Contract Documents.
3. Proprietary name, model number, and similar designations.
4. Manufacturer's name and address.
5. Supplier's name and address.
6. Installer's name and address.
7. Projected delivery date or time span of delivery period.

D. Submit list following procedures and requirements as outlined in Division 1 Specifications Section Shop Drawings, Product Data, and Samples.

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D. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.

1. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface that is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:

a. Name of product and manufacturer.

b. Model and serial number.
c. Capacity.
d. Speed.
e. Ratings.
f. UL Listing or other Owner approved listing agency.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.

B. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.

1. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
2. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
3. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
4. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
5. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
6. Store products subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation.

1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.
2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.

B. Product Selection Procedures: The Contract Documents and governing regulations govern product selection.

1. Visual Matching: Where Specifications require matching an established Sample, the Designer(s) decision will be final on whether a proposed product matches satisfactorily.

a. Where no product available within the specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract

Documents concerning "substitutions" for selection of a matching product in another product category.

2. Visual Selection: Where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Designer will select the color, pattern, and texture from the product line selected.
3. Allowances: Refer to individual Specification Sections and "Allowance" provisions (if included) in Division 1 for allowances that control product selection and for procedures required for processing such selections.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.

1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration.

END OF SECTION 01 60 00

Documents concerning "substitutions" for selection of a matching product in another product category.

2. Visual Selection: Where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Designer will select the color, pattern, and texture from the product line selected.
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PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.

1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration.

END OF SECTION 01 60 00

SECTION 01 71 23 - FIELD ENGINEERING

PART 1 - GENERAL

1. 1 RELATED DOCUMENTS

A. Drawings and General Conditions of the Contract, including other Division 1 Specification Sections, apply to this Section.

1. 2 SUMMARY

A. General: This Section specifies administrative and procedural requirements for field-engineering services including, but not limited to, the following:

1. Land survey work.
2. Civil-engineering services.
3. Damage surveys.
4. Geotechnical monitoring.
5. As-Built documentation.
6. Non-destructive testing services through electromagnetic investigation.

1. 3 SUBMITTALS

A. Certificates: Submit a certificate signed by the land surveyor or professional engineer certifying the location and elevation of improvements.

B. Final Property Survey and As-Built documentation Survey: Submit 2 paper copies, 1 mylar and and CD of AutoCAD & PDF files of the final property survey (42"x30" format).

1. 4 QUALITY CONTROL

A. Surveyor Qualifications: Engage a land surveyor registered in the State of Florida to perform required land-surveying services.

B. Engineer Qualifications: Engage an engineer of the discipline required, licensed in the State of Florida to perform required engineering services.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Identification: The Contractor will be required to establish its own Project control points.

B. Verify layout information shown on the Drawings, in relation to the property survey, existing benchmarks and location of existing underground or concealed utilites and conduits, before proceeding to lay out the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.

1. Do not change or relocate benchmarks or control points without prior written approval of the OAR. Promptly report lost or destroyed reference points or requirements to relocate reference points because of necessary changes in grades or locations.
2. Promptly replace lost or destroyed Project control points utilizing the original survey control points.

C. Establish and maintain a minimum of 2 permanent benchmarks on the site, referenced to data established by survey control points.

1. Record benchmark locations, with horizontal and vertical data, on Project As-Built Documents.

D. Existing Utilities and Equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground or concealed utilities and other construction by use of non-destructuve testing such as electromagnetic investigation or other applicable means.

1. Prior to construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping. Document the information on the As-Built Documents.
2. Develop a detailed plan for non-destructive testing service by use of electromagnetic or other applicable means of investigation that includes the following (at a minimum):

    a. area of investigation
    b. depth of investigation
    c. items to be located
    d. operational constraints

3.2 PERFORMANCE

A. Work from lines and levels established by the Contract Documents. Establish benchmarks and markers to set lines and levels at each story of construction and elsewhere as needed to locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.

1. Advise entities engaged in construction activities of marked lines and levels provided for their use.
2. As construction proceeds, check every major element for line, level, and plumb.

B. Surveyor's Log: Maintain a surveyor's log of control and other survey work. Make this log available for reference to the OAR and the Designer.

1. Record deviations from required lines and levels, and advise the OAR when deviations that exceed indicated or recognized tolerances are detected. On Project As-Built Drawings, record deviations that are accepted and not corrected.

B. Verify layout information shown on the Drawings, in relation to the property survey, existing benchmarks and location of existing underground or concealed utilites and conduits, before proceeding to lay out the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.

1. Do not change or relocate benchmarks or control points without prior written approval of the OAR. Promptly report lost or destroyed reference points or requirements to relocate reference points because of necessary changes in grades or locations.
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1. Record benchmark locations, with horizontal and vertical data, on Project As-Built Documents.

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1. Prior to construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping. Document the information on the As-Built Documents.
2. Develop a detailed plan for non-destructive testing service by use of electromagnetic or other applicable means of investigation that includes the following (at a minimum):

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1. Advise entities engaged in construction activities of marked lines and levels provided for their use.
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B. Surveyor's Log: Maintain a surveyor's log of control and other survey work. Make this log available for reference to the OAR and the Designer.

1. Record deviations from required lines and levels, and advise the OAR when deviations that exceed indicated or recognized tolerances are detected. On Project As-Built Drawings, record deviations that are accepted and not corrected.

C. Site Improvements: Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes, and invert elevations.

D. Building Lines and Levels: Locate and lay out batter boards for structures, building foundations, column grids and locations, floor levels, and control lines and levels required for mechanical and electrical work.

E. Existing Utilities: Furnish information necessary to adjust, move, or relocate existing structures, utility poles, lines, services, or other appurtenances located in or affected by construction. Coordinate with the appropriate Utility and the local Authorities Having Jurisdiction.

F. As-Built Documents: All concealed and underground utilities, equipment, foundations or other permanent conditions shall be surveyed and documented on the As-Built Documents. This includes all discovered conditions. All shall be tied to permanent benchmarks showing horizontal and vertical data. GPS coordinates are to be provided for all beginning/end points and changes in direction. See Closeout Submittals 01 78 00 for all As-built requirements.

G. Final Property Survey: Prepare a final property survey showing significant features (real property) for the Project. Include on the survey a certification, signed by the surveyor, that principal metes, bounds, lines, and levels of the Project are accurately positioned as shown on the survey.

1. Recording: At Substantial Completion, have the final property survey recorded by or with local governing authorities as the official "property survey."

END OF SECTION 01 71 23

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SECTION 01 73 29 - CUTTING AND PATCHING

PART 1 - GENERAL

1. 1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section. Refer to other Specification Sections for specific requirements and limitations applicable to cutting and patching individual parts of the work.

1. 2 SUMMARY

A. This Section includes cutting into existing construction to provide for installation or performance of the Work, subsequent fitting, and patching required to restore surfaces to original condition.

1. Execute cutting, fitting, and patching, including excavation and backfill, required to perform Work and to:

    a. Make parts fit together properly.
    b. Remove and replace defective work.
    c. Remove and replace Work not conforming to requirements of Contract Documents.
    d. Uncover Work to allow for the OAR's observation of covered Work which has been covered prior to required observation of the OAR.

2. Drilling of holes for the installation of fasteners and similar operations is not considered to be cutting and patching.

1. 3 BUILDING MODIFICATIONS

A. General: Modifications to existing facililties and structures shall be provided as indicated and as necessary to accomplish the Work of these Contract Documents.

1. Modifications shall include the removal of existing structure, relocation of materials indicated, termination and relocation of utilities, cutting, patching, cleaning, adjusting, and refinishing, and all incidental work related and required for the installation of new Work.
2. It is intended to maintain daily occupancy functions during the progress of this Work. The Contractor shall closely coordinate his Work to minimize any inconvenience to the Owner or Owner's operations.
3. No Public Services or utility systems shall be interrupted without first notifying the OAR and obtaining concurrence for the interruption as instructed in the Summery of Work.

1. 4 SUBMITTALS

A. Cutting and Patching Proposal: Submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable:

1. Describe the extent of cutting and patching required and how it is to be performed.
2. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
3. List products to be used and firms that will perform Work.
4. Indicate dates when cutting and patching is to be performed.
5. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
6. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.
7. Where cutting and patching activities occur within the building evelope, provide details of compliance with the project "Indoor Air Quality Plan".
8. Approval by the OAR to proceed with cutting and patching does not waive the Owner's right to later require complete removal and replacement of Work found to be cut and patched in an unsatisfactory manner.

B. Hot Work and Dust Hazard - Notify the OAR 48 hours (excluding weekends and holidays) in advance of any welding, cutting, burning, soldering, any dust creating activities or any hot work. Utilize the Owners Hot Work/Dust Hazard Permit Forms.

1. 5 QUALITY ASSURANCE

A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.

B. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.

1. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:

a. Water, moisture, or vapor barriers.
b. Membranes and flashings.
c. Electrical wiring systems.
d. Control systems.
e. Communications systems.
f. Conveying systems.
g. Shoring, bracing, and sheeting.
h. Primary operational systems.
i. Air or smoke barriers.
j. Fire protection systems.
k. Noise and vibration control elements and systems.
l. Water lines.
m. Sewer lines.
n. Other special construction.

C. Visual Requirements: Do not cut and patch construction in a manner that would degrade the building's aesthetics, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched unsatisfactorily.

1. Describe the extent of cutting and patching required and how it is to be performed.
2. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
3. List products to be used and firms that will perform Work.
4. Indicate dates when cutting and patching is to be performed.
5. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
6. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.
7. Where cutting and patching activities occur within the building evelope, provide details of compliance with the project "Indoor Air Quality Plan".
8. Approval by the OAR to proceed with cutting and patching does not waive the Owner's right to later require complete removal and replacement of Work found to be cut and patched in an unsatisfactory manner.

B. Hot Work and Dust Hazard - Notify the OAR 48 hours (excluding weekends and holidays) in advance of any welding, cutting, burning, soldering, any dust creating activities or any hot work. Utilize the Owners Hot Work/Dust Hazard Permit Forms.

1. 5 QUALITY ASSURANCE

A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.

B. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.

1. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:

a. Water, moisture, or vapor barriers.
b. Membranes and flashings.
c. Electrical wiring systems.
d. Control systems.
e. Communications systems.
f. Conveying systems.
g. Shoring, bracing, and sheeting.
h. Primary operational systems.
i. Air or smoke barriers.
j. Fire protection systems.
k. Noise and vibration control elements and systems.
l. Water lines.
m. Sewer lines.
n. Other special construction.

C. Visual Requirements: Do not cut and patch construction in a manner that would degrade the building's aesthetics, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched unsatisfactorily.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, obtain the OAR's approval to use substitute materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

B. Verify that new materials are compatible with existing materials in all respects where cutting and patching occurs.

PART 3 - EXECUTION

3.1 INSPECTION

A. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.

1. Before proceeding, meet at the site with all parties involved in cutting and patching. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts with OAR before proceeding.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.

1. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

C. Cutting: Take all precautions necessary to avoid cutting existing pipe or conduit serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.

1. In general, where cutting is required, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
3. Cut through concrete and masonry using a cutting machine such as a carborundum saw or diamond core drill.
4. Comply with requirements of applicable sections of Division 31 specifications where cutting and patching requires excavating and backfill.
5. By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.

C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
3. Where removal of walls or partitions extends one finished area into another, patch and repair floor and wall surfaces to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.

    a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch, after the patched area has received primer and second coat.

4. Patch, repair, or rehang existing ceilings as necessary to provide an even plane surface of uniform appearance.

3.4 CLEANING

A. Thoroughly clean areas where cutting and patching is performed or used as access. Remove completely any paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION 01 73 29

B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.

1. In general, where cutting is required, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
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END OF SECTION 01 73 29

SECTION 01 74 19 - LEED v4 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous demolition and construction waste.
2. Recycling nonhazardous demolition and construction waste.
3. Disposing of nonhazardous demolition and construction waste.

1.3 DEFINITIONS

B. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

C. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

D. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

E. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

F. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

G. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

H. Source Separation: Sorting of different materials comprising a waste (such as glass, concrete, wood, metal, drywall, etc.) at its point of generation

1.4 PERFORMANCE REQUIREMENTS

A. General: Achieve end-of-Project rates for salvage/recycling of 75 percent by weight of total non-hazardous solid waste generated by the Work. In addition to the above diversion rate goals, contractor shall identify a minimum of 4 (four) other single stream, source separated materials. Single source streams shall be included within their Waste Management Plan and source separated shall be implemented for those

streams. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials, including the following:

1. Demolition Waste:

    a. Asphalt paving.
    b. Concrete.
    c. Concrete reinforcing steel.
    d. Brick.
    e. Concrete masonry units.
    f. Wood studs.
    g. Wood joists.
    h. Plywood and oriented strand board.
    i. Wood paneling.
    j. Wood trim.
    k. Structural and miscellaneous steel.
    l. Rough hardware.
    m. Roofing.
    n. Insulation.
    o. Doors and frames.
    p. Door hardware.
    q. Windows.
    r. Glazing.
    s. Metal studs.
    t. Gypsum board.
    u. Acoustical tile and panels.
    v. Carpet.
    w. Carpet pad.
    x. Demountable partitions.
    y. Equipment.
    z. Cabinets.
    aa. Plumbing fixtures.
    bb. Piping.
    cc. Supports and hangers.
    dd. Valves.
    ee. Sprinklers.
    ff. Mechanical equipment.
    gg. Refrigerants.
    hh. Electrical conduit.
    ii. Copper wiring. .
    jj. Lighting fixtures.
    kk. Lamps.
    ll. Ballasts.
    mm. Electrical devices.
    nn. Switchgear and panelboards.
    oo. Transformers.

2. Construction Waste:

    a. Masonry and CMU.

streams. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials, including the following:

1. Demolition Waste:

    a. Asphalt paving.
    b. Concrete.
    c. Concrete reinforcing steel.
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    e. Concrete masonry units.
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    jj. Lighting fixtures.
    kk. Lamps.
    ll. Ballasts.
    mm. Electrical devices.
    nn. Switchgear and panelboards.
    oo. Transformers.

2. Construction Waste:

    a. Masonry and CMU.

b. Lumber.
c. Wood sheet materials.
d. Wood trim.
e. Metals.
f. Roofing.
g. Insulation.
h. Carpet and pad.
i. Gypsum board.
j. Piping.
k. Electrical conduit.
l. Packaging: Regardless of salvage/recycle goal indicated in "General" Paragraph above, salvage or recycle 100 percent of the following uncontaminated packaging materials:

1) Paper.
2) Cardboard.
3) Boxes.
4) Plastic sheet and film.
5) Polystyrene packaging.
6) Wood crates.
7) Plastic pails.

1.5 ACTION SUBMITTALS

A. Waste Management Plan: Submit plan within 30 days of date established for commencement of the Work.

1.6 INFORMATIONAL SUBMITTALS

A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Include the following information:

1. Material category.
2. Generation point of waste.
3. Total quantity of waste in tons.
4. Quantity of waste salvaged, both estimated and actual in tons.
5. Quantity of waste recycled, both estimated and actual in tons.
6. Total quantity of waste recovered (salvaged plus recycled) in tons.
7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.

B. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.

C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.

D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.

E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by

recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

G. LEED Submittal: Upload documentation to USGBC, signed by Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met. Respond to questions and requests from USGBC regarding construction waste management and disposal until the USGBC has made its determination on the Project's LEED certification application. Document correspondence with USGBC as informational submittals.

1.7 QUALITY ASSURANCE

A. Waste Management Coordinator Qualifications: Experienced firm, with a record of successful waste management coordination of projects with similar requirements.

1. Firm employs a LEED-Accredited Professional, certified by the USGBC, as waste management coordinator.
2. Waste management coordinator may also serve as LEED coordinator.

B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Waste Management Conference: Conduct conference at Project site to comply with requirements in Section 01 31 00 "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:

1. Review and discuss waste management plan including responsibilities of waste management coordinator.
2. Review requirements for documenting quantities of each type of waste and its disposition.
3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
5. Review waste management requirements for each trade.

1.8 WASTE MANAGEMENT PLAN

A. General: Develop a waste management plan according to ASTM E 1609 and requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Distinguish between demolition and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed

recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

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B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed

of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:

1. Total quantity of waste.
2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
3. Total cost of disposal (with no waste management).
4. Revenue from salvaged materials.
5. Revenue from recycled materials.
6. Savings in hauling and tipping fees by donating materials.
7. Savings in hauling and tipping fees that are avoided.
8. Handling and transportation costs. Include cost of collection containers for each type of waste.
9. Net additional cost or net savings from waste management plan.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

1. Comply with operation, termination, and removal requirements in Section 01 50 00 "Temporary Facilities and Controls."

B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for

implementing, monitoring, and reporting status of waste management work plan.

C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.

1. Distribute waste management plan to everyone concerned within three days of submittal return.

2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
2. Comply with Section 01 50 00 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

A. Doors and Hardware: Brace open end of door frames. Except for removing door closers, leave door hardware attached to doors.

B. Lighting Fixtures: Separate lamps by type and protect from breakage.

C. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to OAR.

C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

a. Inspect containers and bins for contamination and remove contaminated materials if found.

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C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

a. Inspect containers and bins for contamination and remove contaminated materials if found.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste from property and transport to recycling receiver or processor.

3.4 RECYCLING DEMOLITION WASTE

A. Asphalt Paving: Break up and transport paving to asphalt-recycling facility.

B. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.

C. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.

D. Metals: Separate metals by type.

1. Structural Steel: Stack members according to size, type of member, and length.
2. Remove and dispose of bolts, nuts, washers, and other rough hardware.

E. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.

F. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.

3.5 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

    a. Comply with requirements in Division 32 sections for use of clean sawdust as organic mulch.

C. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

3.6 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Remove waste materials from property and legally dispose of them.

END OF SECTION

3.6 DISPOSAL OF WASTE

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B. Burning: Do not burn waste materials.

C. Disposal: Remove waste materials from property and legally dispose of them.

END OF SECTION

SECTION 01 74 23 - FINAL CLEANING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of the Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes: final cleaning at completion of work by individual trade and at Substantial Completion.

B. Environmental Requirements: When specified, final cleaning shall comply with Green Seal Standard GS 42.

C. Conduct cleaning and waste-disposal operations in compliance with local laws and ordinances. Comply fully with federal and local environmental and antipollution regulations.

D. Sustainable Design Requirements: When specified, final cleaning shall comply with the requirment in Section 01 81 13.14 "Sustainable Design Requirements - LEED v4 BD+C".

E. Environmental Requirements: Conduct cleaning and waste-disposal operations in compliance with local laws and ordinances. Comply fully with federal and local environmental and antipollution regulations.

1. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains.

B. Burning or burying of debris, rubbish, or other waste material on the premises is not permitted.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cleaning Agents: Use cleaning materials and agents recommended by the manufacturer or fabricator of the material to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. The cleaning products utilized shall be Green Seal complying with one or more of the following standards; by category:

a. Green Seal GS-37, for general-purpose, bathroom, glass and carpet cleaner use for industrial and institutional purposes

1) Environmental Choice CCD-110, for cleaning and degreasing compounds
2) Environmental Choice CCD-146, for hard-surface cleaners
3) Environmental Choice CCD-148, for carpet and upholstery care.

a) Disinfectants, metal polish, floor finishes, strippers or other products not addressed by GS-37 or Environmental Choice CCD-110, 146, or 148 shall meet at least one of the following standards for the appropriate category:

I. Green Seal GS-40, for industrial and institutional floor-care products
II. Environmental Choice CCD-112, for digestion additives for cleaning and odor control
III. Environmental Choice CCD-113, for drain or grease-trap additives
IV. Environmental Choice CCD-115, for odor-control additives
V. Environmental Choice CCD-147, for hard-floor care

b) California Code of Regulations maximum allowable VOC levels for the specific product category.
c) The product shall not contain alkyl phenol ethorylates, dibutyl phthalate heavy metals, ozone-depleting compounds or optical brighteners.
d) The product shall not be tested on animals.
e) Cleaning materials and agents shall be in accordance with manufacturers recommendations. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

2.2 PROHIBITED PRODUCTS

A. The following products shall not be utilized within the Work:

1. Diversey Care a division of Sealed Air; Bravo Heavy-Duty Low Odor Stripper.
2. Diversey Care a division of Sealed Air; BreakDown XC 40 Odor Eliminator Concentrate Fresh.
3. Diversey Care a division of Sealed Air; Alpha-HP Multi-Surface Cleaner.
4. Diversey Care a division of Sealed Air; Crew Clinging Toilet Bowl Cleaner.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Provide final-cleaning operations. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to the condition expected from a commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

B. Cleaning Operations: Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for the entire Project or a portion of the Project.

1. Clean the Project Site, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and foreign substances.

1) Environmental Choice CCD-110, for cleaning and degreasing compounds
2) Environmental Choice CCD-146, for hard-surface cleaners
3) Environmental Choice CCD-148, for carpet and upholstery care.

a) Disinfectants, metal polish, floor finishes, strippers or other products not addressed by GS-37 or Environmental Choice CCD-110, 146, or 148 shall meet at least one of the following standards for the appropriate category:

I. Green Seal GS-40, for industrial and institutional floor-care products
II. Environmental Choice CCD-112, for digestion additives for cleaning and odor control
III. Environmental Choice CCD-113, for drain or grease-trap additives
IV. Environmental Choice CCD-115, for odor-control additives
V. Environmental Choice CCD-147, for hard-floor care

b) California Code of Regulations maximum allowable VOC levels for the specific product category.
c) The product shall not contain alkyl phenol ethorylates, dibutyl phthalate heavy metals, ozone-depleting compounds or optical brighteners.
d) The product shall not be tested on animals.
e) Cleaning materials and agents shall be in accordance with manufacturers recommendations. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

2.2 PROHIBITED PRODUCTS

A. The following products shall not be utilized within the Work:

1. Diversey Care a division of Sealed Air; Bravo Heavy-Duty Low Odor Stripper.
2. Diversey Care a division of Sealed Air; BreakDown XC 40 Odor Eliminator Concentrate Fresh.
3. Diversey Care a division of Sealed Air; Alpha-HP Multi-Surface Cleaner.
4. Diversey Care a division of Sealed Air; Crew Clinging Toilet Bowl Cleaner.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Provide final-cleaning operations. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to the condition expected from a commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

B. Cleaning Operations: Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for the entire Project or a portion of the Project.

1. Clean the Project Site, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and foreign substances.

2. Sweep paved areas broom clean. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
3. Broom clean concrete floors in unoccupied spaces.
4. Remove petrochemical spills, stains, and other foreign deposits.
5. Remove tools, construction equipment, machinery, and surplus material from the site.
6. Vacuum clean carpet and similar soft surfaces, removing debris and excess nap. Shampoo, if required.
7. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
8. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, and similar spaces.
9. Remove marks, stains, fingerprints, and other soils or other dirt from painted, decorated, and natural finished woodwork and other Work.
10. Clean cabinet work removing stains, paint, dirt and dust.
11. Remove spots, plaster, soil and paint from ceramic tile, marble, and other finished materials, and wash or wipe clean.
12. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
13. Clean flooring materials thoroughly, comply with materials manufacturer's instructions and recommendations.
14. Remove labels that are not permanent labels.
15. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

    a. All restoration efforts shall be in strict accordance with LEED v4 requirements for Low Emitting Materials.
    b. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.

16. Clean food-service equipment to a sanitary condition, ready and acceptable for its intended use.
17. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
18. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
19. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs.
20. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
21. Clean ductwork, blowers, and coils of units that were operated during construction.
22. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
23. Leave the Project clean and ready for occupancy.

C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid the Project of rodents, insects, and other pests. Comply with regulations of local authorities.

D. Removal of Protection: Remove temporary protection and facilities installed during construction to protect previously completed installations during the remainder of the construction period.

E. Compliances: Comply with governing regulations and safety standards for cleaning operations. Remove waste materials from the site and dispose of lawfully and in strict compliance with the project Construction Waste Management Plan.

1. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Dispose of these materials as directed by the OAR.
2. The Contractor shall not dispose of debris or waste materials on the Owner's property without the prior approval of the Owner.

F. Maintenance: Provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.

3.2 PROTECTIONS

A. General: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

1. Excessive static or dynamic loading.
2. Excessive internal or external pressures.
3. Excessively high or low temperatures.
4. Thermal shock.
5. Excessively high or low humidity.
6. Air contamination or pollution.
7. Water or ice.
8. Solvents.
9. Chemicals.
10. Light.
11. Radiation.
12. Puncture.
13. Abrasion.
14. Heavy traffic.
15. Soiling, staining, and corrosion.
16. Bacteria.
17. Rodent and insect infestation.
18. Combustion.
19. Electrical current.
20. High-speed operation.
21. Improper lubrication.
22. Unusual wear or other misuse.
23. Contact between incompatible materials.
24. Destructive testing.
25. Misalignment.
26. Excessive weathering.
27. Unprotected storage.
28. Improper shipping or handling.

D. Removal of Protection: Remove temporary protection and facilities installed during construction to protect previously completed installations during the remainder of the construction period.

E. Compliances: Comply with governing regulations and safety standards for cleaning operations. Remove waste materials from the site and dispose of lawfully and in strict compliance with the project Construction Waste Management Plan.

1. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Dispose of these materials as directed by the OAR.
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6. Air contamination or pollution.
7. Water or ice.
8. Solvents.
9. Chemicals.
10. Light.
11. Radiation.
12. Puncture.
13. Abrasion.
14. Heavy traffic.
15. Soiling, staining, and corrosion.
16. Bacteria.
17. Rodent and insect infestation.
18. Combustion.
19. Electrical current.
20. High-speed operation.
21. Improper lubrication.
22. Unusual wear or other misuse.
23. Contact between incompatible materials.
24. Destructive testing.
25. Misalignment.
26. Excessive weathering.
27. Unprotected storage.
28. Improper shipping or handling.

29. Theft.

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SECTION 01 78 00 - CLOSEOUT SUBMITTALS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 01 Specification Sections, apply to this Section. Refer to other specification sections for requirements and limitations applicable to Project Closeout.

1.2 SUMMARY

A. Closeout is defined to include general requirements near end of Contract Time, in preparation for Substantial Completion, Final Completion and Acceptance, Final Payment, normal termination of Contract, occupancy by Owner and similar actions evidencing completion of the Work. Specific requirements for individual units of Work are specified in other sections.

1.3 SUBSTANTIAL COMPLETION

A. General: Refer to the General Conditions of the Contract.

B. Procedures to achieving Substantial Completion:

1. Thirty (30) Days prior to requesting inspection for the certification of Substantial Completion, prepare and submit the preliminary LEED Closeout Matrix for acceptance (see specification Section 01 33 29 Sustainable Material Content Forms). Matrix shall identify all relevant specification sections

2. The Contractor shall, five (5) business days prior to requesting inspection for certification of Substantial Completion, prepare and submit to the OAR the following:

    a. The Contractor's prepared comprehensive punch list of items to be completed or corrected. The punch list shall include all incomplete Work items and the schedule to complete each item.
    b. Draft Operation and Maintenance (O&M) Manuals for review by the OAR for conformance with the Contract documents. These will be returned to the Contractor.
    c. As-Built Documents (from Contractor) for review by the OAR for conformance with the Contract Documents. These will be returned to the Contractor.
    d. The Substantial LEED Closeout Matrix with all available documentation and final documentation delivery status.

3. The Contractor will request a preliminary inspection from the OAR for the determination that the Project is ready for the Substantial Completion Inspection. The Contractor will prior to the request:

    a. Complete its punch list and provide a copy to the OAR.
    b. Schedule inspections from the Authorities Having Jurisdiction and provide the time and date to the OAR.

4. If the OAR's preliminary inspection discloses any item that is not in accordance with the requirements of the Contract Documents, whether or not included on the Contractor's punch list, the OAR shall so notify the Contractor and the Contractor shall add the items to its punch list. The Contractor shall proceed to complete or correct every item on the revised punch list and request re-inspection from the OAR.
5. If the OAR determines that the Work is ready, the Substantial Completion Inspection will be scheduled at a minimum of three (3) business days after the OAR's preliminary inspection.
6. Form #008 Substantial Completion Acceptance (SCA) will be used to: document the time and place of the project closeout inspections, establish the participants to be involved in the inspections, establish the date of Substantial Completion, document the acceptance of the Substantial Completion punch list, document the date all Substantial Completion punch list items were completed and document the date of Final Completion.
7. The following parties will attend the Substantial Completion inspection: the OAR, the Contractor, and the Designer. The following Owner representatives may attend: GOAA ARFF, GOAA Construction, GOAA Engineering, GOAA Environmental, GOAA IT, GOAA Maintenance, GOAA Operations, GOAA Properties, GOAA Risk Management, and any involved tenant(s).
8. Following the inspection, the OAR and Designer will determine if the Work is substantially complete. If it is determined to be Substantially Complete, the OAR will use this date in the preparation of Form #007 Certificate of Substantial Completion (CoSC) and the Contractor in the preparation of the written warranties. The following will be used in the determination of the Substantial Completion date:

    a. Certificate of Occupancy/Certificate of Completion (CofO) or Agency Sign Off (as required). The date of the CofO does not establish the date for Substantial Completion.
    b. Recommendation from the OAR and Designer that the Project is Substantially Complete.
    c. Acceptance from the Contractor and OAR that the preliminary Substantial Completion punch lists represent most of the items required for completion of the Work. The OAR shall distribute the preliminary Substantial Completion punch lists to the Contractor within a maximum of three (3) business days after the date of Substantial Completion.
    d. Acceptance by the OAR of the draft warranties.
    e. Acceptance by the OAR of the draft Operation & Maintenance Manuals.
    f. Agreement from the Contractor and OAR that the Owner will have complete use or occupancy and may use, operate, and maintain the Project in all respects, for its intended purpose and without undue interference by the Contractor's Final Completion efforts.
    g. If any of the above items are not accepted or incomplete the Contractor shall correct any items found not to be in accordance with the requirements of the Contract Documents and once the items have been corrected, the Contractor shall provide a written request for re-review and or re-inspection.

9. When the Project is determined to be Substantially Complete the OAR will prepare a typed Substantial Completion punch list which includes any items from the preliminary Substantial Completion punch list that have not yet been completed plus all punch list items from the Designer, OAR, Owner and others, and Form #007 Certificate of Substantial Completion (CoSC) within fifteen (15) business days from the date of Substantial Completion. As a condition for Final Completion, the Contractor remains responsible for the correction of any work which does not comply with the requirements of the Contract, even if not listed on the Substantial Completion Punchlist and discovered after the Substantial Completion Punchlist and has been published. The OAR will schedule a meeting with the Contractor, Designer, and any Owner's representatives to:

4. If the OAR's preliminary inspection discloses any item that is not in accordance with the requirements of the Contract Documents, whether or not included on the Contractor's punch list, the OAR shall so notify the Contractor and the Contractor shall add the items to its punch list. The Contractor shall proceed to complete or correct every item on the revised punch list and request re-inspection from the OAR.
5. If the OAR determines that the Work is ready, the Substantial Completion Inspection will be scheduled at a minimum of three (3) business days after the OAR's preliminary inspection.
6. Form #008 Substantial Completion Acceptance (SCA) will be used to: document the time and place of the project closeout inspections, establish the participants to be involved in the inspections, establish the date of Substantial Completion, document the acceptance of the Substantial Completion punch list, document the date all Substantial Completion punch list items were completed and document the date of Final Completion.
7. The following parties will attend the Substantial Completion inspection: the OAR, the Contractor, and the Designer. The following Owner representatives may attend: GOAA ARFF, GOAA Construction, GOAA Engineering, GOAA Environmental, GOAA IT, GOAA Maintenance, GOAA Operations, GOAA Properties, GOAA Risk Management, and any involved tenant(s).
8. Following the inspection, the OAR and Designer will determine if the Work is substantially complete. If it is determined to be Substantially Complete, the OAR will use this date in the preparation of Form #007 Certificate of Substantial Completion (CoSC) and the Contractor in the preparation of the written warranties. The following will be used in the determination of the Substantial Completion date:

    a. Certificate of Occupancy/Certificate of Completion (CofO) or Agency Sign Off (as required). The date of the CofO does not establish the date for Substantial Completion.
    b. Recommendation from the OAR and Designer that the Project is Substantially Complete.
    c. Acceptance from the Contractor and OAR that the preliminary Substantial Completion punch lists represent most of the items required for completion of the Work. The OAR shall distribute the preliminary Substantial Completion punch lists to the Contractor within a maximum of three (3) business days after the date of Substantial Completion.
    d. Acceptance by the OAR of the draft warranties.
    e. Acceptance by the OAR of the draft Operation & Maintenance Manuals.
    f. Agreement from the Contractor and OAR that the Owner will have complete use or occupancy and may use, operate, and maintain the Project in all respects, for its intended purpose and without undue interference by the Contractor's Final Completion efforts.
    g. If any of the above items are not accepted or incomplete the Contractor shall correct any items found not to be in accordance with the requirements of the Contract Documents and once the items have been corrected, the Contractor shall provide a written request for re-review and or re-inspection.

9. When the Project is determined to be Substantially Complete the OAR will prepare a typed Substantial Completion punch list which includes any items from the preliminary Substantial Completion punch list that have not yet been completed plus all punch list items from the Designer, OAR, Owner and others, and Form #007 Certificate of Substantial Completion (CoSC) within fifteen (15) business days from the date of Substantial Completion. As a condition for Final Completion, the Contractor remains responsible for the correction of any work which does not comply with the requirements of the Contract, even if not listed on the Substantial Completion Punchlist and discovered after the Substantial Completion Punchlist and has been published. The OAR will schedule a meeting with the Contractor, Designer, and any Owner's representatives to:

1) Review Form #007 CoSC, all of its requirements and submit to the Contractor for appropriate acceptance and signature.
2) Review the attachments: Form #008 SCA, Substantial Completion punch list and the CofO.
3) Establish the date for the completion of the Substantial Completion punch list items.
4) Establish the responsibilities of the Owner and Contractor for security, maintenance, operations, cleaning and housekeeping, heating and cooling, utilities, damage to the Work and insurance.
5) Review and accept the Contractor's written warranties and guarantees from its Subcontractors and Suppliers bearing the date of Substantial Completion stating the period of warranty as required by the Contract Documents, the Final Operation & Maintenance Manuals, and As-built Documents.

1.4 PARTIAL OCCUPANCY OR USE

A. General: Refer to the General Conditions of the Contract.

B. The Owner may occupy or use any completed or partially completed portion of the Work at any stage and, if the Owner chooses such partial occupancy, the Contractor and Owner shall designate by an agreement the conditions of such partial occupancy, provided such occupancy or use is consented to by the Owner's insurer and authorized by public authorities having jurisdiction over the Work.

1. Such partial occupancy or use may commence whether or not the portion is Substantially Complete.

C. Procedures to achieving partial occupancy or use:

1. The Owner will request the OAR to coordinate with the Contractor for a partial occupancy or use of a portion of the Work.
2. If the OAR determines that the Work is ready, a partial occupancy or use inspection will be scheduled at a minimum of three (3) business days after the OAR's preliminary inspection.
3. Immediately prior to such partial occupancy or use inspection, the Owner, OAR, Contractor and Designer shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

a. The following parties will attend the partial occupancy or use inspection: the OAR, the Contractor, and the Designer. The following Owner representatives may attend: GOAA Construction, GOAA Engineering, GOAA Environmental, GOAA Maintenance, GOAA Operations, GOAA Properties, GOAA Risk Management, GOAA ARFF, and any involved tenant(s).
b. Following the inspection, the OAR and Designer will determine if the Work is ready for partial occupancy or use. If it is determined to be ready, the OAR will use this date in the preparation of Form #009 Partial Occupancy/Use (POUA) and the Contractor in preparation of any agreed upon written warranties. The following will be used in the determination of the POUA date:

1) Certificate(s) of Occupancy (CofO) / Agency Sign Off (as required) for the area being occupied.

2) Recommendation from the OAR and Designer that the Project is ready for partial occupancy or use.
3) Acceptance from the Contractor and OAR that the preliminary punch lists represent most of the items required for completion of the Work. The OAR shall distribute the preliminary punch lists to the Contractor within three (3) business days after the date of the POUA.
4) Acceptance by the OAR of the draft warranties if requested.
5) Acceptance by the OAR of the draft Operation & Maintenance Manuals if requested.
6) Agreement from the Contractor and OAR that the Owner will have complete occupancy or use and may use, operate, and maintain the Project in all respects, for its intended purpose and without undue interference by the Contractor's Final Completion efforts.
7) Agree that partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work which is not in conformance with the requirements of the Contract Documents.

c. When the Project is determined to be ready for partial occupancy or use the OAR will prepare a typed punch list which includes any items from the preliminary punch list that have not yet been completed plus all punch list items from the Designer, OAR, Owner and others, and Form #009 Partial Occupancy/Use (POUA) within a maximum of fifteen (15) business days of the date of POUA. As a condition for Substantial and Final Completion, the Contractor remains responsible for the correction of any work which does not comply with the requirements of the Contract, even if not listed on the punch list and discovered after the punch list has been published. The OAR will schedule a meeting with the Contractor, Designer, and any Owner's representatives to:

1) Review Form #009 POUA, all of its requirements and submit to the Contractor for appropriate acceptance and signature.
2) Review the attachments: punch list and the CofO.
3) Establish the date for the completion of the punch list items.
4) Establish the responsibilities of the Owner and Contractor for security, maintenance, operations, cleaning and housekeeping, heating and cooling, utilities, damage to the Work and insurance.
5) Review and accept the requested Contractor's written warranties and guarantees from its Subcontractors and Suppliers bearing the date of the POUA stating the period of warranty as required by the Contract Documents.

1.5 FINAL COMPLETION

A. General: Refer to the General Conditions of the Contract.

B. Procedures: Complete the following.

1. Before requesting final inspection for certification of Final Completion and final payment, prepare and submit to the OAR the following:

a. Contractor's certified copy of the Substantial Completion punch list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the OAR.

b. Final meter readings for utilities, and similar data as of the date of Substantial Completion, or when the Owner took possession of and responsibility for corresponding elements of the Work.
c. Closeout Documentation Manual.

2. If the OAR determines that the Work is ready, the Final Completion Inspection will be scheduled at a minimum of three (3) business days after the OAR's preliminary inspection.

3. The following parties will attend the Final Completion inspection: the OAR, the Contractor, and the Designer. The following Owner representatives may attend: GOAA ARFF, GOAA Construction, GOAA Engineering, GOAA Environmental, GOAA IT, GOAA Maintenance, GOAA Operations, GOAA Properties, GOAA Risk Management, and any involved tenant(s).

4. Upon acceptance of the Final Completion Inspection, the Designer, OAR and GOAA Maintenance are to sign off on Part IV of Form #008 SCA and provide the final inspection date. The OAR is to provide the Contractor's completed punch list which will be field verified and each item initialed complete by the Designer and the OAR. The OAR is to provide documentation of FAA/FDOT final inspections, as required. Part IV of Form #008 SCA must be completed prior to processing the Contractor's final pay application.

C. If necessary, re-inspection will be repeated at the Contractor's expense. Re-inspection Procedure: The OAR and Designer will re-inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the OAR and Designer. Repeat Final Completion Procedures above until Final Completion is accepted.

1.6 CLOSEOUT DOCUMENTATION MANUAL

A. Description: Submit the manual in a vinyl covered, 3-ring binder; white, with hard cover, with clear vinyl pockets on front (sized to hold 8-1/2" x 11" sheets) and spine (minimum spine size 1", maximum 3"). Binder shall be "View Binder" as manufactured by Avery Consumer Products, AVE 0560 series, or approved equal. Each section shall be divided by an 8-1/2" x 11" reinforced, clear ring binder index, 5 tabs, as manufactured by Wilson Jones, Stock No. WJ-54125, or approved equal. Documents shall also be submitted in PDF format on a CD. The PDF file shall be enabled for Adobe Reader's Comment and Markup functionality. All stamps and markings described herein shall be electronically duplicated.

1. Full size, machine lettered labels shall be inserted into the front, back, and spine pockets. Labels shall be on white paper with black print, and shall clearly identify the following:

GREATER ORLANDO AVIATION AUTHORITY
ORLANDO INTERNATIONAL AIRPORT
(BP-S195, Term C, Ph 1X - Airside Concourse)
(Manual Title)
(Date)

2. Contents of the Manual shall include:

a. First page shall be a Cover Page, identifying:

b. Final meter readings for utilities, and similar data as of the date of Substantial Completion, or when the Owner took possession of and responsibility for corresponding elements of the Work.
c. Closeout Documentation Manual.

2. If the OAR determines that the Work is ready, the Final Completion Inspection will be scheduled at a minimum of three (3) business days after the OAR's preliminary inspection.

3. The following parties will attend the Final Completion inspection: the OAR, the Contractor, and the Designer. The following Owner representatives may attend: GOAA ARFF, GOAA Construction, GOAA Engineering, GOAA Environmental, GOAA IT, GOAA Maintenance, GOAA Operations, GOAA Properties, GOAA Risk Management, and any involved tenant(s).

4. Upon acceptance of the Final Completion Inspection, the Designer, OAR and GOAA Maintenance are to sign off on Part IV of Form #008 SCA and provide the final inspection date. The OAR is to provide the Contractor's completed punch list which will be field verified and each item initialed complete by the Designer and the OAR. The OAR is to provide documentation of FAA/FDOT final inspections, as required. Part IV of Form #008 SCA must be completed prior to processing the Contractor's final pay application.

C. If necessary, re-inspection will be repeated at the Contractor's expense. Re-inspection Procedure: The OAR and Designer will re-inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the OAR and Designer. Repeat Final Completion Procedures above until Final Completion is accepted.

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A. Description: Submit the manual in a vinyl covered, 3-ring binder; white, with hard cover, with clear vinyl pockets on front (sized to hold 8-1/2" x 11" sheets) and spine (minimum spine size 1", maximum 3"). Binder shall be "View Binder" as manufactured by Avery Consumer Products, AVE 0560 series, or approved equal. Each section shall be divided by an 8-1/2" x 11" reinforced, clear ring binder index, 5 tabs, as manufactured by Wilson Jones, Stock No. WJ-54125, or approved equal. Documents shall also be submitted in PDF format on a CD. The PDF file shall be enabled for Adobe Reader's Comment and Markup functionality. All stamps and markings described herein shall be electronically duplicated.

1. Full size, machine lettered labels shall be inserted into the front, back, and spine pockets. Labels shall be on white paper with black print, and shall clearly identify the following:

GREATER ORLANDO AVIATION AUTHORITY
ORLANDO INTERNATIONAL AIRPORT
(BP-S195, Term C, Ph 1X - Airside Concourse)
(Manual Title)
(Date)

2. Contents of the Manual shall include:

a. First page shall be a Cover Page, identifying:

GREATER ORLANDO AVIATION AUTHORITY
ORLANDO INTERNATIONAL AIRPORT
(BP-S195, Term C, Ph 1X - Airside Concourse)
(Manual Title)
(Date)

b. Second page shall be a Table of Contents.
c. The next section shall list the Names, Addresses, Contacts, and Phone Numbers for the following:

    1) OAR(s)
    2) Designer(s)
    3) Contractor
    4) Subcontractors (first-tier)

d. Change Order Summary (prepared by GOAA)
e. Summary of Disbursements (prepared by GOAA)
f. Receipt/Acceptance Form for As-Built Documents

    1) Progress and As-Built Drawing Certification(s) for each applicable Subcontractor (Exhibit D; prepared by Contractor)
    2) GOAA Construction Form # 011 (prepared by OAR) with Transmittal to GOAA ENGINEERING (signed by GOAA Engineering)

g. Receipt Form for O&M Manuals (GOAA Construction Form # 012; prepared by OAR) with Transmittal to GOAA MAINTENANCE (signed by GOAA Maintenance)
h. Parking Permit Office Release Form (GOAA Construction Form # 001; prepared by Contractor) (signed by GOAA Ground Transportation)
i. Badge & I.D. Office Release Form (GOAA Construction Form # 002; prepared by Contractor) (signed by GOAA Access Control)
j. Key Shop Release Form (GOAA Construction Form # 003; prepared by Contractor) (signed by GOAA Lockshop)
k. Environmental Group Letter of Concurrence for Closeout (if applicable; prepared by GOAA)
l. Certificate(s) of Substantial Completion (GOAA Construction Form # 007; prepared by OAR)

    1) Substantial Completion Acceptance with Final Substantial Completion Punch list initialed and dated by Contractor (GOAA Construction Form # 008; prepared by OAR)
    2) Partial Occupancy / Use Agreement(s), or POUA (GOAA Construction Form # 009; prepared by OAR)
    3) FAA / FDOT Final Inspection(s) (if applicable; if project has FAA and/or FDOT funding, provide documentation of the invitation to FAA / FDOT and/or the appropriate sign off)

m. Certificate(s) of Occupancy / Agency Sign Off (furnished by Contractor)
n. Current Certificate of Insurance: (furnished by Contractor)

    1) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled

or allowed to expire until at least 30 days prior written notice has been given to the Owner: and

2) a written statement that the Contractor knows no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents

o. Consent of Surety to Final Payment with Power of Attorney (AIA Form # G707; furnished by Contractor) (original)
p. Final Release Form from General Contractor (Specification Section 00 65 19.29; prepared by Contractor) (original, notarized with corporate seal)
q. Final Release Form(s) from Subcontractors / Suppliers (Specification Section 00 65 19.33; prepared by Subcontractor)
r. Final Payment Application (2 originals, signed and notarized by Contractor and signed by Designer and OAR (DBE/MWBE/LDB Disbursement Page completed with Subcontractor performance rating and total payment)
s. Executed Originals of Warranties/Guarantees.

1.7 AS-BUILT DOCUMENTS

A. General: Do not use as-built documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to as-built documents for the OAR's reference during normal working hours.

1. Submit all As-Built Documents to the OAR as specified in Paragraph 1.3.B.
2. Include fire alarm and building control system(s) drawings and specifications.

B. As-Built Documents: As-Built Documents include Drawings, Specifications, Addenda, Change Orders, and other Modifications. Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1. Mark As-Built sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
2. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.
3. Note related Change Order numbers where applicable.
4. Organize As-Built drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
5. Mark EVERY PAGE of the Drawings with "As-Built".

C. Accurate as-built documents are very important for the Owner and serve several important functions. The Owner utilizes the as-built documents for operation and maintenance, and future modifications, renovations, and particularly for mechanical, plumbing and electrical systems, which are mostly hidden from view.

1. The working as-built shall show, but shall not be limited to, the following:

or allowed to expire until at least 30 days prior written notice has been given to the Owner: and

2) a written statement that the Contractor knows no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents

o. Consent of Surety to Final Payment with Power of Attorney (AIA Form # G707; furnished by Contractor) (original)
p. Final Release Form from General Contractor (Specification Section 00 65 19.29; prepared by Contractor) (original, notarized with corporate seal)
q. Final Release Form(s) from Subcontractors / Suppliers (Specification Section 00 65 19.33; prepared by Subcontractor)
r. Final Payment Application (2 originals, signed and notarized by Contractor and signed by Designer and OAR (DBE/MWBE/LDB Disbursement Page completed with Subcontractor performance rating and total payment)
s. Executed Originals of Warranties/Guarantees.

1.7 AS-BUILT DOCUMENTS

A. General: Do not use as-built documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to as-built documents for the OAR's reference during normal working hours.

1. Submit all As-Built Documents to the OAR as specified in Paragraph 1.3.B.
2. Include fire alarm and building control system(s) drawings and specifications.

B. As-Built Documents: As-Built Documents include Drawings, Specifications, Addenda, Change Orders, and other Modifications. Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1. Mark As-Built sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
2. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.
3. Note related Change Order numbers where applicable.
4. Organize As-Built drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
5. Mark EVERY PAGE of the Drawings with "As-Built".

C. Accurate as-built documents are very important for the Owner and serve several important functions. The Owner utilizes the as-built documents for operation and maintenance, and future modifications, renovations, and particularly for mechanical, plumbing and electrical systems, which are mostly hidden from view.

1. The working as-built shall show, but shall not be limited to, the following:

a. All concealed and underground utilities, equipment, foundations or other permanent conditions shall be surveyed and documented. This includes all discovered conditions. All shall be tied to permanent benchmarks showing horizontal and vertical data including but not limited to: beginning/end points, changes in direction points, inverts, grades of drainage, depths below the surface, all surface or underground components such as valves, manholes, drop inlets, clean outs, meters, corner points, etc. Each of the above shall also include a description of: actual quantity, size, and material. GPS coordinates are to be provided for all.
b. The location and dimensions of any changes within the building structure and architectural components. The dimensions shall be actual field measurements.
c. Correct dimensions and details transferred from shop drawings.
d. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.
e. Actual location of anchors, construction and control joints, etc., in concrete.
f. Changes in location of equipment and architectural features.
g. Where Contract drawings or specifications present options, only the option selected for construction shall be shown on the final as-built prints. Cross out such words and phrases as "optimal requirement," "or approved substitution," etc., and list specifically the items of material provided.
h. Unusual or uncharted obstructions that are encountered in the contract work area during construction.
i. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.
j. If borrow material for this project is from sources on the Owner's property, or if Owner's property is used as a spoil area, the Contractor shall furnish a contour map of the final borrow pit/spoil area elevations.
k. Layout and schematic drawings of electrical circuits and piping. See the Electrical Specifications for the level of detail required to be accurately documented.
l. Layout and schematic drawings of mechanical and plumbing systems and piping. All shall be tied to permanent benchmarks showing horizontal and vertical data of primary and secondary branches.
m. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems. All shall be tied to permanent benchmarks showing horizontal and vertical data of primary and secondary branches.
n. Changes or modifications that result from the final inspection.

1.8 OPERATION & MAINTENANCE MANUALS

A. General: If all specified information can be submitted in a single binder without being overfilled, submit two (2) copies in a white binder with white labels.

1. If all of the information cannot be submitted in a single binder, submit two (2) per design discipline as follows:

a. Architectural; submit in a white binder with white labels.
b. Mechanical; submit in a white binder with green labels.
c. Fire Protection; submit in a white binder with red labels.
d. Electrical; submit in a black binder with white labels.
e. Civil; submit in a white binder with yellow labels.

2. Submit O&M Manuals to OAR as specified in Paragraph 1.3.B.

B. Description: Submit the manual in a vinyl covered, 3-ring binder; with hard cover, with clear vinyl pockets on front (sized to hold 8-1/2" x 11" sheets) and spine (minimum spine size 1", maximum 3"). Binder shall be "View Binder" as manufactured by Avery Consumer Products, AVE 0560 series, or approved equal. Provide additional binders if a single 3-inch binder is insufficient to contain all closeout information. Each section shall be divided by an 8-1/2" x 11" reinforced, clear ring binder index, 5 tabs. as manufactured by Wilson Jones, Stock No. WJ-54125, or approved equal. Documents shall also be submitted in PDF format on a CD. The PDF file shall be enabled for Adobe Reader's Comment and Markup functionality. All stamps and markings described herein shall be electronically duplicated.

1. Full size, machine lettered labels shall be inserted into the front, back, and spine pockets. Labels shall be on paper in color(s) specified with black print, and shall clearly identify the following:

GREATER ORLANDO AVIATION AUTHORITY
ORLANDO INTERNATIONAL AIRPORT
(BP-S195, Term C, Ph 1X - Airside Concourse)
(Manual Title)
(Date)

2. Contents of the Manual shall include:

a. First page shall be a Cover Page, identifying:

GREATER ORLANDO AVIATION AUTHORITY
ORLANDO INTERNATIONAL AIRPORT
(BP-S195, Term C, Ph 1X - Airside Concourse)
(Manual Title)
(Date)

b. Second page shall be a Table of Contents indicating the contents of the binder(s).
c. The third page shall list the Names, Addresses, Contacts, and Phone Numbers for the following:

1) OAR
2) Designer(s)
3) General Contractor
4) Subcontractors
5) Sub-subcontractors
6) Suppliers

d. The remaining portions of the manual shall be separated by each major division of work as identified by the Contract Documents.

1) PROJECT INFORMATION (Exhibit A).
2) Within each major division of work, each section shall be individually identified by a typed index/tab. For each specification requirement, submit the following information in the order outlined below:

2. Submit O&M Manuals to OAR as specified in Paragraph 1.3.B.

B. Description: Submit the manual in a vinyl covered, 3-ring binder; with hard cover, with clear vinyl pockets on front (sized to hold 8-1/2" x 11" sheets) and spine (minimum spine size 1", maximum 3"). Binder shall be "View Binder" as manufactured by Avery Consumer Products, AVE 0560 series, or approved equal. Provide additional binders if a single 3-inch binder is insufficient to contain all closeout information. Each section shall be divided by an 8-1/2" x 11" reinforced, clear ring binder index, 5 tabs. as manufactured by Wilson Jones, Stock No. WJ-54125, or approved equal. Documents shall also be submitted in PDF format on a CD. The PDF file shall be enabled for Adobe Reader's Comment and Markup functionality. All stamps and markings described herein shall be electronically duplicated.

1. Full size, machine lettered labels shall be inserted into the front, back, and spine pockets. Labels shall be on paper in color(s) specified with black print, and shall clearly identify the following:

GREATER ORLANDO AVIATION AUTHORITY
ORLANDO INTERNATIONAL AIRPORT
(BP-S195, Term C, Ph 1X - Airside Concourse)
(Manual Title)
(Date)

2. Contents of the Manual shall include:

a. First page shall be a Cover Page, identifying:

GREATER ORLANDO AVIATION AUTHORITY
ORLANDO INTERNATIONAL AIRPORT
(BP-S195, Term C, Ph 1X - Airside Concourse)
(Manual Title)
(Date)

b. Second page shall be a Table of Contents indicating the contents of the binder(s).
c. The third page shall list the Names, Addresses, Contacts, and Phone Numbers for the following:

1) OAR
2) Designer(s)
3) General Contractor
4) Subcontractors
5) Sub-subcontractors
6) Suppliers

d. The remaining portions of the manual shall be separated by each major division of work as identified by the Contract Documents.

1) PROJECT INFORMATION (Exhibit A).
2) Within each major division of work, each section shall be individually identified by a typed index/tab. For each specification requirement, submit the following information in the order outlined below:

a) Copies of all warranties/guarantees, as specifically required by the specification section, and Letters of Certification. Executed original warranties/guarantees shall be included in the appropriate section of the Closeout Manual(s).

b) Copies of the "Approved" Shop Drawing/Submittals/ Equipment Manufacturer's Schematics. Oversized drawings shall be folded and inserted in clear vinyl pockets or, for large sets of drawings, provide an insert page stipulating that the drawings are stored at GOAA ENGINEERING. All copies shall be stamped with the appropriate review stamp, marked, signed, and dated.

c) Operation and Maintenance Instructions, including but not limited to:

- Manufacturer's Recommended Care and Cleaning
- Installation Instructions
- Parts Lists
- Lubrication Checklists
- Equipment Supplier Lists
- Special Instructions
- Preventive Maintenance Instructions.

d) Service and Maintenance Contracts: Include Name, address, and phone number and contact of Manufacturer's authorized repair company.

e) Completed GOAA Turnover Forms:

- Performance Verification and Demonstration to Owner (Exhibit B) signed by Contractor and GOAA representative
- Voltage and amperage Readings (Exhibit C) signed by Contractor, Designer and OAR
- Motor Test Information (Exhibit D) signed by Contractor and OAR
- Check-out Memo (Exhibit E) signed by Contractor and Manufacturer's representative

f) Equipment and/or Systems Test Data and Conductor Insulation Resistance Test Data Sheets by installer and/or manufacturer where required. Form(s) to be provided by the installer and/or manufacturer performing the test [Exhibits G, H (signed by Contractor, Designer and GOAA representative), I (signed by Contractor, Subcontractor and GOAA), J (signed by Contractor and OAR) and K (signed by Contractor, Designer and OAR)].

g) Copies of electrical panel schedules and directories.

C. Submit one copy of the O&M manual in PDF format on CD-ROM. Create a PDF file for each section of the manual. PDF files shall be named BPXXX OM Sec XXXXX.pdf

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 CLOSEOUT PROCEDURES

A. Operation and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:

1. Operation and Maintenance manuals.
2. As-Built Documents.
3. Spare parts and materials.
4. Tools.
5. Lubricants.
6. Fuels.
7. Identification systems.
8. Control sequences.
9. Hazards.
10. Cleaning.
11. Warranties and bonds.
12. Maintenance agreements and similar continuing commitments.

B. As part of instruction for operating equipment, demonstrate the following procedures:

1. Start-up.
2. Shutdown.
3. Emergency operations.
4. Noise and vibration adjustments.
5. Safety procedures.

3.2 CLEANING

A. General: General cleaning during construction is required.

B. Final Cleaning: Refer to Section 01 74 23, Final Cleaning.

3.3 ATTACHMENTS

A. The following information sheets have been included in this Section:

1. Exhibit A: Project Information
2. Exhibit B: Performance Verification and Demonstration to Owner
3. Exhibit C: Voltage and Amperage Readings
4. Exhibit D: Motor Test Information
5. Exhibit E: Check-Out Memo
6. Exhibit F: Progress and As-Built Document Certification
7. Exhibit G: D-C High Voltage Cable Test Report
8. Exhibit H: Ground Test Information
9. Exhibit I: Spare Parts Certification Memo
10. Exhibit J: Existing Facilities Investigation Memo
11. Exhibit K: Conductor Insulation Resistance Test Memo
12. Example: Description Sheet – Cover
13. Example: Description Sheet - Spine

A. Operation and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:

1. Operation and Maintenance manuals.
2. As-Built Documents.
3. Spare parts and materials.
4. Tools.
5. Lubricants.
6. Fuels.
7. Identification systems.
8. Control sequences.
9. Hazards.
10. Cleaning.
11. Warranties and bonds.
12. Maintenance agreements and similar continuing commitments.

B. As part of instruction for operating equipment, demonstrate the following procedures:

1. Start-up.
2. Shutdown.
3. Emergency operations.
4. Noise and vibration adjustments.
5. Safety procedures.

3.2 CLEANING

A. General: General cleaning during construction is required.

B. Final Cleaning: Refer to Section 01 74 23, Final Cleaning.

3.3 ATTACHMENTS

A. The following information sheets have been included in this Section:

1. Exhibit A: Project Information
2. Exhibit B: Performance Verification and Demonstration to Owner
3. Exhibit C: Voltage and Amperage Readings
4. Exhibit D: Motor Test Information
5. Exhibit E: Check-Out Memo
6. Exhibit F: Progress and As-Built Document Certification
7. Exhibit G: D-C High Voltage Cable Test Report
8. Exhibit H: Ground Test Information
9. Exhibit I: Spare Parts Certification Memo
10. Exhibit J: Existing Facilities Investigation Memo
11. Exhibit K: Conductor Insulation Resistance Test Memo
12. Example: Description Sheet – Cover
13. Example: Description Sheet - Spine

EXHIBIT A
PROJECT INFORMATION
Orlando International Airport

Contractor shall fill in the blanks below and insert in the Operation and Maintenance Manuals. Submit one (1) sheet for each major division of Work.

Project Name: _____

Specification Division Number & Name: _____

Subcontractor: _____

Contact:_____ Phone: ____

Date Project Bid: _____

Project Start Date: _____

Days allowed for Construction: _____

Target Completion: _____

Substantial Completion Certification Date: _____

	Date Submitted	Date Provided
Close-out Documentation Manual:	_____	_____
Operation and Maintenance Manuals:	_____	_____
Owner Performance Verification and Demonstrations:	_____	_____
Manufacturer's Performance Verification Memos:	_____	_____
Manufacturer's Test Data:	_____	_____
Record Documents:	_____	_____

EXHIBIT B
PERFORMANCE VERIFICATION AND DEMONSTRATION TO OWNER
Orlando International Airport

This form verifies that the Owner has been given a demonstration of the proper operation on the equipment or systems noted below.

Project Name: _____

Specification Division Number & Name: _____

Equipment/Systems Demonstrated: _____

Along with a complete demonstration of the equipment/system, these items have been reviewed at this demonstration and shall be included in the Operation and Maintenance Manuals, under the appropriate specification section:

1) Written operating instructions.
2) Test data and performance verification information as required by the installer and/or manufacturer.
3) Maintenance information published by manufacture's representative.
4) Check-out Memo signed by manufacturer's representative.
5) Printed warranties by manufacturer of equipment.
6) Explanation of the warranty/guarantee on the system.
7) Prints showing actual "As-Built" conditions.

(Name of General Contractor) ___ (Signature, Title, Date)

(Name of Subcontractor) ___ (Signature, Title, Date)

A demonstration of the system/equipment in operation and of the maintenance procedures has been successfully completed.

GREATER ORLANDO AVIATION AUTHORITY

(Signature, Date) ___ (GOAA Department)

EXHIBIT B
PERFORMANCE VERIFICATION AND DEMONSTRATION TO OWNER
Orlando International Airport

This form verifies that the Owner has been given a demonstration of the proper operation on the equipment or systems noted below.

Project Name: _____

Specification Division Number & Name: _____

Equipment/Systems Demonstrated: _____

Along with a complete demonstration of the equipment/system, these items have been reviewed at this demonstration and shall be included in the Operation and Maintenance Manuals, under the appropriate specification section:

1) Written operating instructions.
2) Test data and performance verification information as required by the installer and/or manufacturer.
3) Maintenance information published by manufacture's representative.
4) Check-out Memo signed by manufacturer's representative.
5) Printed warranties by manufacturer of equipment.
6) Explanation of the warranty/guarantee on the system.
7) Prints showing actual "As-Built" conditions.

(Name of General Contractor) ___ (Signature, Title, Date)

(Name of Subcontractor) ___ (Signature, Title, Date)

A demonstration of the system/equipment in operation and of the maintenance procedures has been successfully completed.

GREATER ORLANDO AVIATION AUTHORITY

(Signature, Date) ___ (GOAA Department)

EXHIBIT C
VOLTAGE AND AMPERAGE READINGS
Orlando Executive Airport

Project Name: _____

Switchgear/Panelboard: _____

Full Load Amperage Readings: Date: _____ Time: _____

Phase A: _____
Phase B: _____
Phase C: _____
Neutral: _____
Ground: _____

Full Load Voltage Readings: Date: _____ Time: _____

Phase: A to N _____ A to B _____
B to N _____ A to C _____
C to N _____ B to C _____

Voltage at the End of the Longest Branch: _____

Type of Load: _____

No Load Voltage Readings: Date: _____ Time: _____

Phase: A to N _____ A to B _____
B to N _____ A to C _____
C to N _____ B to C _____

Contractor's Representative: _____ Date

Engineer's Representative: _____ Date

Owner's Authorized Representative: _____ Date

EXHIBIT D
MOTOR TEST INFORMATION
Orlando Executive Airport

Project Name: _____

Description of Motor: _____

Checked By: _____ Date Checked: _____

a) Name and Identifying Mark of Motor (Indicate at existing): _____

b) Manufacturer: _____

c) Model Number: _____

d) Serial Number: _____

e) RPM: _____

f) Frame Size: _____

g) Code Letter: _____

h) Horsepower: _____

i) Nameplate, Voltage and Phase: _____

j) Nameplate Amps: _____

k) Actual Voltage: _____

l) Actual Amps: _____

m) Starter Manufacturer: _____

n) Starter Size: _____

o) Heater Size, Catalog No. and Amp Rating: _____

p) Manufacturer of Dual-Element Fuse: _____

q) Amp Rating of Fuse: _____

r) Power Factor: _____

Contractor's Representative: _____
Date

Signature of Checker: _____
Date

Owner's Authorized Representative: _____
Date

EXHIBIT D
MOTOR TEST INFORMATION
Orlando Executive Airport

Project Name: _____

Description of Motor: _____

Checked By: _____ Date Checked: _____

a) Name and Identifying Mark of Motor (Indicate at existing): _____

b) Manufacturer: _____

c) Model Number: _____

d) Serial Number: _____

e) RPM: _____

f) Frame Size: _____

g) Code Letter: _____

h) Horsepower: _____

i) Nameplate, Voltage and Phase: _____

j) Nameplate Amps: _____

k) Actual Voltage: _____

l) Actual Amps: _____

m) Starter Manufacturer: _____

n) Starter Size: _____

o) Heater Size, Catalog No. and Amp Rating: _____

p) Manufacturer of Dual-Element Fuse: _____

q) Amp Rating of Fuse: _____

r) Power Factor: _____

Contractor's Representative: _____
Date

Signature of Checker: _____
Date

Owner's Authorized Representative: _____
Date

EXHIBIT E
CHECK-OUT MEMO
Orlando International Airport

This form shall be completed and a copy provided to the Owner at the Owner's Performance Verification and Demonstration meeting. A copy shall also be included in the specification section of the Operation and Maintenance Manual for the equipment checked.

Project Name: _____

Type of Equipment Checked: _____

Equipment Number: _____

Name of Equipment Manufacturer: _____

Signature below by the Manufacturer's authorized representative signifies that the equipment has been satisfactorily tested and checked out on the job by the manufacturer.

1. The attached Test Data and Performance Verification information was used to evaluate the equipment installation and operation.

2. The equipment is properly installed, has been tested by the manufacturer's authorized representative, and is operating satisfactorily in accordance with all requirements, except for items noted below. *

3. Written operating and maintenance information has been presented to the Contractor, and gone over with him in detail.

4. Sufficient copies of all applicable operating and maintenance information, part lists, lubrication checklists, and warranties have been furnished to the Contractor for insertion in the Operation and Maintenance Manuals.

Manufacturer's Representative: _____
(Print or Type Name and Title)

(Print or Type Address and Phone Number)

Signature of Manufacturer's Representative: _____
Date Checked
Witnessed By: _____
(Signature and Title of Contractor's Representative)

*Exceptions Noted at Time of Check-Out: (Use additional pages if necessary.)

EXHIBIT F
PROGRESS AND AS-BUILT DRAWING CERTIFICATION
Orlando International Airport

This form shall be completed and submitted with the As-Built Documents. Submit one form for each contractor/subcontractor providing as-built information. Include a copy of this form in the Close-out Documentation Manual.

Project Name: _____

Specification Division Number & Name: _____

The Contractor's and Subcontractor's signatures below certify that the attached drawings and specifications were marked and revised as items were installed/changed during the course of construction, and that these documents represent and accurate "As-Built" condition of the work as actually installed.

_____
(Name of General Contractor)

_____
(Signature, Title, Date)

_____
(Name of Subcontractor)

_____
(Signature, Title, Date)

EXHIBIT F
PROGRESS AND AS-BUILT DRAWING CERTIFICATION
Orlando International Airport

This form shall be completed and submitted with the As-Built Documents. Submit one form for each contractor/subcontractor providing as-built information. Include a copy of this form in the Close-out Documentation Manual.

Project Name: _____

Specification Division Number & Name: _____

The Contractor's and Subcontractor's signatures below certify that the attached drawings and specifications were marked and revised as items were installed/changed during the course of construction, and that these documents represent and accurate "As-Built" condition of the work as actually installed.

_____
(Name of General Contractor)

_____
(Signature, Title, Date)

_____
(Name of Subcontractor)

_____
(Signature, Title, Date)

EXHIBIT G
D-C HIGH VOLTAGE CABLE TEST REPORT
(Refer to Specification Section 26 00 90)

Project Name: _____
Location: _____

Description: _____
Rated Voltage: _____

TEST DATA

Set Leakage at Test Voltage _____ma Variac _____

Pri. Voltage _____ Sphere Gap _____Inches

Duct Temp. _____Ambient Temp._____ Weather_____
Cable Status _____1 hour prior to test.

TEST RESULTS

Phase or Conductor Starting Time	A MA	B MA	C MA	Remarks
0				
15 sec.				
30 sec.				
45 sec.				
1 min.				
2 min.				
3 min.				
4 min.				
5 min.				

Final Test Voltage: _____ Time Finish: _____

KV DC After 1 Min.: Test Procedure _____ No. of Terminals _____
Joints _____
Witnessed By: _____
Performed By: _____ _____

EXHIBIT H
GROUND TEST INFORMATION
(Refer to Specification Section 26 00 10)

Project Name: _____

Ground Type: _____

Test By: _____

Date of Test: _____

Ground Location: _____

Ground Type (rod, water pipe, etc.): _____

Prior to Connection to System: Ground: _____(OHMS)

After Connection to System: Ground: _____(OHMS)

Weather Conditions (Wet/Dry): _____ Soil Conditions (Wet/Dry): _____

Contractor's Representative: _____
Date

Engineer's Representative: _____
Date

Owner's Representative: _____
Date

EXHIBIT H
GROUND TEST INFORMATION
(Refer to Specification Section 26 00 10)

Project Name: _____

Ground Type: _____

Test By: _____

Date of Test: _____

Ground Location: _____

Ground Type (rod, water pipe, etc.): _____

Prior to Connection to System: Ground: _____(OHMS)

After Connection to System: Ground: _____(OHMS)

Weather Conditions (Wet/Dry): _____ Soil Conditions (Wet/Dry): _____

Contractor's Representative: _____
Date

Engineer's Representative: _____
Date

Owner's Representative: _____
Date

EXHIBIT I
SPARE PARTS CERTIFICATION MEMO
(Refer to Division 26 Specifications)

This form shall be completed and a copy provided to the Owner at the Owner's Performance Verification and Demonstration meeting. A copy shall also be included in the specifications section of each Operation and Maintenance Manual for the equipment checked.

Name of Project: _____

Type of Spare Parts: _____

Specification Reference: _____

Quantity of Spare Parts: _____

Signature below by the Contractor and subcontractor signifies that the spare parts required by the drawings and/or specifications have been turned over to the Owner. Signature by the Owner acknowledges receipt of the same spare parts.

Name of General Contractor: _____

Authorized Signature and Title: _____

Date: _____

Name of Subcontractor: _____

Authorized Signature and Title: _____

Date: _____

Name of Owner: _____

Authorized Signature and Title: _____

Date: _____

EXHIBIT J
EXISTING FACILITIES INVESTIGATION MEMO
(Refer to Specification Section 26 00 90)

Name of Project: _____

The existing systems on the above project have been investigated and checked to determine the existing condition of all existing electrical systems within the area(s) affected by the scope of work on this project. The investigation consisted of testing all electrical systems/devices as required by Section 26 00 90 of these specifications.

All equipment was found to be operational except as noted herein:

_____

_____

_____

_____

_____

_____

_____

Name of Prime Contractor: _____

Authorized Signature and Title: _____
Date
Name of Authorized Owner Representative: _____

Authorized Signature and Title: _____
Date

Note To Contractor: Upon completion of investigation and one week prior to the commencement of work, submit five copies of the completed EXISTING FACILITIES INVESTIGATION MEMO to the Owner's Authorized Representative, signed and dated by the Contractor. The Owner's Authorized Representative signature and date is required to verify receipt of memo. Retain copy(ies) and submit copy of MEMO in each Operation and Maintenance Manual. Contractor shall submit quantities of Memos as required to present required information.

EXHIBIT J
EXISTING FACILITIES INVESTIGATION MEMO
(Refer to Specification Section 26 00 90)

Name of Project: _____

The existing systems on the above project have been investigated and checked to determine the existing condition of all existing electrical systems within the area(s) affected by the scope of work on this project. The investigation consisted of testing all electrical systems/devices as required by Section 26 00 90 of these specifications.

All equipment was found to be operational except as noted herein:

_____

_____

_____

_____

_____

_____

_____

Name of Prime Contractor: _____

Authorized Signature and Title: _____
Date

Name of Authorized Owner Representative: _____

Authorized Signature and Title: _____
Date

Note To Contractor: Upon completion of investigation and one week prior to the commencement of work, submit five copies of the completed EXISTING FACILITIES INVESTIGATION MEMO to the Owner's Authorized Representative, signed and dated by the Contractor. The Owner's Authorized Representative signature and date is required to verify receipt of memo. Retain copy(ies) and submit copy of MEMO in each Operation and Maintenance Manual. Contractor shall submit quantities of Memos as required to present required information.

EXHIBIT K
CONDUCTOR INSULATION RESISTANCE TEST MEMO
(Refer to Specification Section 26 00 90)

NAME OF PROJECT: _____

Conductor Location From: _____ To: _____

Size of Conductor _____

Insulation Type _____ Insulation Voltage Rating _____

Date of Test_____Time of Test _____

Weather Conditions _____

Test Voltage (DC) _____ Range _____

Megger Instrument/Serial Number _____

Testing Methodology _____

INSULATION RESISTANCE MEASUREMENT
(Acceptable Measurement not to be less than one (1) Megohm)

Phase A to Ground _____

Phase B to Ground _____

Phase C to Ground _____

Neutral to Ground _____

Isolated Ground to Ground _____

Name of General Contractor: _____

Authorized Signature and Title: _____
Date

Name of Consulting Engineer: _____

Authorized Signature and Title: _____
Date

Name of Owner's Authorized Representative: _____

Authorized Signature and Title: _____
Date

EXAMPLE - Description Sheet - Cover

GREATER ORLANDO
AVIATION AUTHORITY

ORLANDO
INTERNATIONAL
AIRPORT

BID PACKAGE NO. 000

[DESCRIPTION OF PROJECT]

OPERATION AND MAINTENANCE MANUAL

EXAMPLE - Description Sheet - Cover

**GREATER ORLANDO
AVIATION AUTHORITY**

**ORLANDO
INTERNATIONAL
AIRPORT**

BID PACKAGE NO. 000

[DESCRIPTION OF PROJECT]

OPERATION AND MAINTENANCE MANUAL

EXAMPLE - Description Sheet - Spine

G.O.A.A. **O.I.A.** **B.P. #000** **[DESCRIPTION OF PROJECT]** **ELECTRICAL** **OPERATION** **AND** **MAINTENANCE** **MANUAL**	**G.O.A.A.** **O.I.A.** **B.P. #000** **[DESCRIPTION OF PROJECT]** **SYSTEMS** **OPERATION** **AND** **MAINTENANCE** **MANUAL**

END OF SECTION 01 78 00

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SECTION 01 81 13.14 - SUSTAINABLE DESIGN REQUIREMENTS - LEED V4 BD+C

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions/Provisions of Contract, including other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes requirements and procedures for compliance with certain prerequisites and credits needed for the Project to obtain "LEED Version 4 Building Design and Construction" (LEED v4 BD+C) certification. Certification criteria is based on the USGBC's LEED v4 BD+C scorecard provided in Specification Section 01 33 29 – Sustainable Material Content Forms

1. Individual material requirements for LEED compliance are also included within the individual Specification Sections and will reference back to this section for the compliance criteria.
2. Some LEED prerequisites and credits needed to obtain the indicated LEED certification depend on Designer's design and other aspects of Project that are not part of the Work of the Contract.
3. Compliance with the targeted construction credits (as outlined in Specification Section 01 33 29 – Sustainable Material Content Forms) have been captured within the design documents. Achievement of those credits relies on the Contractor's successful implementation and oversight of those requirements.
4. Compliance with the requirements needed to obtain LEED prerequisites and credits will be used as one of the criterion needed to evaluate substitution requests and comparable product requests.

1.3 DEFINITIONS

A. LEED: USGBC's "LEED Version 4 Building Design and Construction."

1. Below are some of the Definitions and terminology included within "LEED Version 4 Building Design and Construction" (LEED v4 BD+C) for reference.

B. Chain-of-Custody Certificates: Certificates signed by manufacturers certifying that wood used to make products was obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001. Certificates shall include evidence that manufacturer is certified for chain of custody by an FSC-accredited certification body.

C. Chemical Abstract Service Registration Number (CASRN): CAS Registry Numbers are unique numerical identifiers assigned by the Chemical Abstracts Service to every chemical described in the open scientific literature (currently including those described from at least 1957 through the present) and including elements, isotopes, organic and inorganic compounds, ions, organometallics, metals, non-structural materials (aka 'UVCB's- i.e., materials of Unknown,

Variable Composition, or Biological origin).[2] They are also referred to as CAS RNs, CAS Numbers, etc.

D. Cradle-to-gate: Cradle-to-gate assessment analysis of a product's partial life cycle, from resource extraction (cradle) to the factory gate (before it is transported for distribution and sale). It omits the use and the disposal phases of the product.

E. Cradle to Cradle Certification: The Cradle to Cradle Certified™ Product Standard guides designers and manufacturers through a continual improvement process that looks at a product through five quality categories —material health, material reutilization, renewable energy and carbon management, water stewardship, and social fairness. A product receives an achievement level in each category — Basic, Bronze, Silver, Gold, or Platinum — with the lowest achievement level representing the product's overall mark.

F. CPDH Emissions Testing: Standard Method for the Testing & Evaluation of VOC Emissions CDPH/EHLB/Standard Method V1.1. (February 2010) Page 4 of 52 Author/Acknowledgements The California Department of Public Health (CDPH), Indoor Air Quality (IAQ) Section, prepared this document, and CDPH approved its release on March 4, 2010.

G. EPD: An EPD® (*Environmental Product Declaration*) is a verified and registered document that communicates transparent and comparable information about the life-cycle environmental impact of a product.

H. Extended Producer Responsibility: Extended Producer responsibility measures undertaken by the maker of a product to accept its own and sometimes other manufacturers' products as postconsumer waste at the end of the products' useful life. Producers recover and recycle the materials for use in new products of the same type. To count toward credit compliance, a program must be widely available. For carpet, extended producer responsibility must be consistent with NSF/ANSI 140–2007. Also known as closed-loop program or product take-back.

I. GBCI: Green Business Certification Inc. is an American organization that provides third-party credentialing and verification for several rating systems relating to the built environment.

J. Health Product Declaration: Health Product Declaration (HPDs) provide a full disclosure of the potential chemicals of concern in products by comparing product ingredients to a wide variety of "hazard" lists published by government authorities and scientific associations.

K. Regional Materials: Materials that have been extracted (recycling location can serve as the material harvest location), harvested, or recovered, as well as manufactured, within 100 miles of Project site.

1. Recycled Content: The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.
2. Postconsumer" material is defined as waste material generated by households or by commercial, industrial, and institutional facilities in their role as end users of the product, which can no longer be used for its intended purpose.
3. Pre-consumer material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials, such as rework, regrind, or scrap, generated in a process and capable of being reclaimed within the same process that generated it.

Variable Composition, or Biological origin).[2] They are also referred to as CAS RNs, CAS Numbers, etc.

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3. Pre-consumer material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials, such as rework, regrind, or scrap, generated in a process and capable of being reclaimed within the same process that generated it.

L. Pilot Credit: Pilot Credits are potential LEED credits created by U.S. Green Building Council and included within the Pilot Credit Library as an opportunity to "test drive" LEED credits before member's vote to include in the next full-version iteration of the LEED rating system.

M. Product/Material: A Product or material permanently installed within the building. An item that arrives on the project site either as a finished element ready for installation or as a component to another item assembled on-site. The product unit is defined by the functional requirement for use in the project; this includes the physical components and services needed to serve the intended function of the permanently installed building product. In addition, similar product within a specification, each contributes as a separate product.

N. Volatile Organic Compounds (VOCs): VOCs are a class of chemicals that are volatile (evaporate easily) and are organic compounds (contain carbon atoms). Some common VOCs include acetone and automotive gasoline.

1.4 PREINSTALLATION MEETINGS

A. Pre-installation Meeting/Conference: Conduct a Sustainable Requirement conference(s) at Project site to review LEED requirements and action plans for meeting requirements. Meeting/conference can be included as part of the pre-installation meeting agenda

1.5 ADMINISTRATIVE REQUIREMENTS

A. Respond to Contractor related questions and requests from the OAR generated by the Designer, USGBC, GBCI and the LEED Facilitation Team LEED. Question and response information may be asked post project completion. Contractor shall be required to gather and respond to all requests until the GBCI/USGBC review has been completed and determination on the Project's LEED certification application has been finalized. Document responses as informational submittals.

B. Submit Contractor related documentation and submittals to the OAR for review by the Designer, USGBC, GBCI and the LEED Facilitation Team, as indicated. LEED Question and response information may be asked post project completion. Contractor shall be required to gather and respond to all requests until the final GBCI/USGBC review has been completed and determination on the Project's LEED certification application has been finalized.

1. Document correspondence with USGBC as informational submittals.
2. Utilize Reporting Forms provided in Specification Section 01 33 29 – Sustainable Material Content Forms

1.6 ACTION SUBMITTALS

A. General: Provide any and all Sustainable Design submittals required by this section and other Specification Sections as indicated.

B. Sustainable design submittals are in addition to other submittals.

1. If a submitted item is identical to that submitted to comply with other submittal requirements, include an additional copy of the information along with the applicable Submittal Data form (see Specification Section 01 33 29 – Sustainable Material Content Forms).

C. Sustainable Design Documentation Submittals (see materials section below for requirement criteria).

1. Documentation for Environmental Product Declarations
2. Documentation for Products with Multi-attribute optimization.
3. Documentation for Products with Raw Material Source & Extraction Reporting
4. Documentation for products with Leadership Extraction Practices
5. Documentation on Material Ingredient Reporting
6. Documentation on Material Ingredient Optimization
7. Documentation of Product Manufacturer Supply Chain Optimization
8. Documentation and plan as outlined in Specification Section 01 74 19 "Construction Waste Management and Disposal."
9. Documentation on Low Emitting Materials
10. Construction Indoor-Air-Quality (IAQ) Management Plan outlined in Specification Section 01 35 46.
11. IAQ Assessment Documentation and Testing as outlined in specifications Specification Section 01 35 46

1.7 INFORMATIONAL SUBMITTALS

A. Qualification Data: For LEED coordinator.

B. Provide Materials Cost Data for all scopes of work as indicated in specifications section 01 29 73 "Schedule of Values". Material costs shall exclude labor, overhead, and profit.

1. Sustainable Design Action Plans: Provide preliminary submittals within 30 days of date established for commencement of the Work. Plan shall indicate how the following requirements will be met:
2. Submittal log indicating all Sustainable Design submission requirements outlined. (see Specification Section 01 33 23 Shop drawings product data and samples and 01 78 00 Closeout Submittals for additional guidance)
3. Project Specific Waste Management Plan complying with Section 01 74 19 "Construction Waste Management and Disposal."
4. Construction IAQ Management Plan complying with Specification Section 01 35 46.
5. No Smoking Plan indicating designated smoking areas, implementation and oversight.
6. Commissioning Implementation Plan complying with Specification Section 01 91 13 General Commissioning and 01 91 15 Facility Exterior Enclosure Commissioning.
7. Clean Construction Tracking Plan: See Clean Construction requirement included elsewhere within this section.

C. Sustainable Design Progress Reports: Concurrent with each Application for Payment, submit monthly status report provided in Specification Section 01 33 29

1.8 QUALITY ASSURANCE

A. LEED Coordinator: Engage an experienced LEED-accredited professional to coordinate LEED requirements. LEED coordinator must have practical related experience from at least one LEED BD & C project. LEED Coordinator may also serve as waste management coordinator.

C. Sustainable Design Documentation Submittals (see materials section below for requirement criteria).

1. Documentation for Environmental Product Declarations
2. Documentation for Products with Multi-attribute optimization.
3. Documentation for Products with Raw Material Source & Extraction Reporting
4. Documentation for products with Leadership Extraction Practices
5. Documentation on Material Ingredient Reporting
6. Documentation on Material Ingredient Optimization
7. Documentation of Product Manufacturer Supply Chain Optimization
8. Documentation and plan as outlined in Specification Section 01 74 19 "Construction Waste Management and Disposal."
9. Documentation on Low Emitting Materials
10. Construction Indoor-Air-Quality (IAQ) Management Plan outlined in Specification Section 01 35 46.
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7. Clean Construction Tracking Plan: See Clean Construction requirement included elsewhere within this section.

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A. LEED Coordinator: Engage an experienced LEED-accredited professional to coordinate LEED requirements. LEED coordinator must have practical related experience from at least one LEED BD & C project. LEED Coordinator may also serve as waste management coordinator.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Provide products and procedures necessary to obtain the LEED construction credits as required within this Specification Section, other Specification Sections and throughout the contract documents as outlined in the following:

1. Documentation for Environmental Product Declarations

a. Products with a publicly available, critically reviewed life-cycle assessment conforming to ISO 14044 that have at least a cradle to gate scope are valued as one quarter (1/4) of a product for the purposes of credit achievement calculation.
b. Environmental Product Declarations which conform to ISO 14025, 14040, 14044, and EN 15804 or ISO 21930 and have at least a cradle to gate scope.

1) Industry-wide (generic) EPD -- Products with third-party certification (Type III), including external verification, in which the manufacturer is explicitly recognized as a participant by the program operator are valued as one half (1/2) of a product for purposes of credit achievement calculation.
2) Product-specific Type III EPD - Products with third-party certification (Type III), including external verification in which the manufacturer is explicitly recognized as the participant by the program operator are valued as one whole product for purposes of credit achievement calculation.

2. Documentation for Products with Multi-attribute optimization.

a. Third party certified products that demonstrate impact reduction below industry average in at least three of the following categories are valued at 100% of their cost for credit achievement calculations. ° global warming potential (greenhouse gases), in CO2e; ° depletion of the stratospheric ozone layer, in kg CFC-11; ° acidification of land and water sources, in moles H+ or kg SO2; ° eutrophication, in kg nitrogen or kg phosphate; ° formation of tropospheric ozone, in kg NOx or kg ethene; and depletion of nonrenewable energy resources, in MJ. · USGBC approved program
b. Include documentation for regional material compliance. Documentation should indicate location of the material manufacturer, material extraction point, harvest, or recovery for each raw material including their and distance from the Project Site. Provide costs for all materials.

3. Documentation for Products with Raw Material Source & Extraction Reporting

a. Raw Material Reporting: Products that have publicly released a report from their raw material suppliers which include raw material supplier extraction locations, a commitment to long-term ecologically responsible land use, a commitment to reducing environmental harms from extraction and/or manufacturing processes, and a commitment to meeting applicable standards or programs voluntarily that address responsible sourcing criteria.
b. CSR Products sourced from manufacturers with self-declared reports are valued as one half (1/2) of a product for credit achievement. · Third-party verified corporate sustainability reports (CSR) which include environmental impacts of extraction

operations and activities associated with the manufacturer's product and the product's supply chain.

c. All Reports must be published within one year of the project's LEED registration date.
d. A compliant report must be issued by either the manufacturer or the raw material supplier and cover at least the criteria listed in the rating system requirements.
e. At least 90% of the contents of each product must be from raw materials covered by a compliant report; no partial credit is allowed for products that do not meet this threshold.
f. Reports obtained directly from raw material suppliers must verify the use of the raw material in products purchased for the project building. A manufacturer's report must trace activities to the source of extraction of the product's raw materials. In either case, acceptable frameworks for raw material reporting include the following:

1) Global Reporting Initiative (GRI) Sustainability Report

4. Documentation for products with Leadership Extraction Practices

a. Extended producer responsibility - Products purchased from a manufacturer (producer) that participates in an extended producer responsibility program or is directly responsible for extended producer responsibility. Products meeting extended producer responsibility criteria are valued at 50% of their cost for the purposes of credit achievement calculation.
b. Bio-based materials - Bio-based products must meet the Sustainable Agriculture Network's Sustainable Agriculture Standard. Bio-based raw materials must be tested using ASTM Test Method D6866 and be legally harvested, as defined by the exporting and receiving country. Exclude hide products, such as leather and other animal skin material. Products meeting bio-based materials criteria are valued at 100% of their cost for the purposes of credit achievement calculation.
c. Wood products - Wood products must be certified by the Forest Stewardship Council or USGBC-approved equivalent. Products meeting wood products criteria are valued at 100% of their cost for the purposes of credit achievement calculation.
d. Materials reuse - Reuse includes salvaged, refurbished, or reused products. Products meeting materials reuse criteria are valued at 100% of their cost for the purposes of credit achievement calculation.
e. Recycled Content - Recycled content is the sum of postconsumer recycled content plus one-half the pre-consumer recycled content, based on cost.
f. Products meeting Leadership Extraction Practice Criteria above shall report regional material information. Information should include extraction (recycling location can serve as the material harvest location), harvest, or recovery locations, as well as manufacturing locations that are within 100 miles of Project site.

5. Documentation on Material Ingredient Reporting

a. Demonstrate the chemical inventory of the product to at least 0.1% (1000 ppm) using one of the following:

1) Manufacturer Inventory - The manufacturer has published complete content inventory for the product following these guidelines: ° A publicly available inventory of all ingredients identified by name and Chemical Abstract Service Registration Number (CASRN)

operations and activities associated with the manufacturer's product and the product's supply chain.

c. All Reports must be published within one year of the project's LEED registration date.

d. A compliant report must be issued by either the manufacturer or the raw material supplier and cover at least the criteria listed in the rating system requirements.

e. At least 90% of the contents of each product must be from raw materials covered by a compliant report; no partial credit is allowed for products that do not meet this threshold.

f. Reports obtained directly from raw material suppliers must verify the use of the raw material in products purchased for the project building. A manufacturer's report must trace activities to the source of extraction of the product's raw materials. In either case, acceptable frameworks for raw material reporting include the following:

1) Global Reporting Initiative (GRI) Sustainability Report

4. Documentation for products with Leadership Extraction Practices

a. Extended producer responsibility - Products purchased from a manufacturer (producer) that participates in an extended producer responsibility program or is directly responsible for extended producer responsibility. Products meeting extended producer responsibility criteria are valued at 50% of their cost for the purposes of credit achievement calculation.

b. Bio-based materials - Bio-based products must meet the Sustainable Agriculture Network's Sustainable Agriculture Standard. Bio-based raw materials must be tested using ASTM Test Method D6866 and be legally harvested, as defined by the exporting and receiving country. Exclude hide products, such as leather and other animal skin material. Products meeting bio-based materials criteria are valued at 100% of their cost for the purposes of credit achievement calculation.

c. Wood products - Wood products must be certified by the Forest Stewardship Council or USGBC-approved equivalent. Products meeting wood products criteria are valued at 100% of their cost for the purposes of credit achievement calculation.

d. Materials reuse - Reuse includes salvaged, refurbished, or reused products. Products meeting materials reuse criteria are valued at 100% of their cost for the purposes of credit achievement calculation.

e. Recycled Content - Recycled content is the sum of postconsumer recycled content plus one-half the pre-consumer recycled content, based on cost.

f. Products meeting Leadership Extraction Practice Criteria above shall report regional material information. Information should include extraction (recycling location can serve as the material harvest location), harvest, or recovery locations, as well as manufacturing locations that are within 100 miles of Project site.

5. Documentation on Material Ingredient Reporting

a. Demonstrate the chemical inventory of the product to at least 0.1% (1000 ppm) using one of the following:

1) Manufacturer Inventory - The manufacturer has published complete content inventory for the product following these guidelines: ° A publicly available inventory of all ingredients identified by name and Chemical Abstract Service Registration Number (CASRN)

2) Health Product Declaration - The end use product has a published, complete Health Product Declaration with full disclosure of known hazards in compliance with the Health Product Declaration Open Standard.
3) Cradle to Cradle - The end use product has been certified at the Cradle to Cradle v2 Basic level or Cradle to Cradle v3 Bronze level.

6. Documentation on Material Ingredient Optimization

a. Use products that document their material ingredient optimization using the paths below:

1) GreenScreen v1.2 Benchmark. Products that have fully inventoried chemical ingredients to 100 ppm that have no Benchmark 1 hazards
2) Cradle to Cradle Certified. End use products are certified Cradle to Cradle. Products will be valued as follows: ° Cradle to Cradle v2 Gold: 100% of cost ° Cradle to Cradle v2 Platinum: 150% of cost ° Cradle to Cradle v3 Silver: 100% of cost ° Cradle to Cradle v3 Gold or Platinum: 150% of cost
3) International Alternative Compliance Path – REACH Optimization. End use products and materials that do not contain substances that meet REACH criteria for substances of very high concern.

7. Documentation of Product Manufacturer Supply Chain Optimization

a. Products sourced from product manufacturers who engage in validated and robust safety, health, hazard, and risk programs which at a minimum document at least 99% (by weight) of the ingredients used to make the building product or building material, and
b. Products sourced from product manufacturers with independent third party verification of their supply chain that at a minimum verifies:

1) Processes are in place to communicate and transparently prioritize chemical ingredients along the supply chain according to available hazard, exposure and use information to identify those that require more detailed evaluation
2) Processes are in place to identify, document, and communicate information on health, safety and environmental characteristics of chemical ingredients ° Processes are in place to implement measures to manage the health, safety and environmental hazard and risk of chemical ingredients ° Processes are in place to optimize health, safety and environmental impacts when designing and improving chemical ingredients ° Processes are in place to communicate, receive and evaluate chemical ingredient safety and stewardship information along the supply chain ° Safety and stewardship information about the chemical ingredients is publicly available from all points along the supply chain

8. Documentation complying with Section 01 74 19 "Construction Waste Management and Disposal."
9. Documentation on Low Emitting Materials

a. Product data for adhesives and sealants used inside the weatherproofing system. Products shall indicate VOC content and laboratory test reports showing compliance with requirements for low-emitting materials including the requirements of the California Department of Public Health (CDPH) Standard Method v1.1–2010, and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using

Environmental Chambers. Contractor shall provide documentation on VOC amounts for all materials used in the Work.

1) All adhesives and sealants wet-applied on site must meet the applicable chemical content requirements of SCAQMD Rule 1168, July 1, 2005, Adhesive and Sealant Applications, as analyzed by the methods specified in Rule 1168. The provisions of SCAQMD Rule 1168 do not apply to adhesives and sealants subject to state or federal consumer product VOC regulations.
2) Wood Glues: 30 g/L.
3) Metal-to-Metal Adhesives: 30 g/L.
4) Adhesives for Porous Materials (Except Wood): 50 g/L.
5) Subfloor Adhesives: 50 g/L.
6) Plastic Foam Adhesives: 50 g/L.
7) Carpet Adhesives: 50 g/L.
8) Carpet Pad Adhesives: 50 g/L.
9) VCT and Asphalt Tile Adhesives: 50 g/L.
10) Cove Base Adhesives: 50 g/L.
11) Gypsum Board and Panel Adhesives: 50 g/L.
12) Rubber Floor Adhesives: 60 g/L.
13) Ceramic Tile Adhesives: 65 g/L.
14) Multipurpose Construction Adhesives: 70 g/L.
15) Fiberglass Adhesives: 80 g/L.
16) Contact Adhesives: 80 g/L.
17) Structural Glazing Adhesives: 100 g/L.
18) Wood Flooring Adhesives: 100 g/L.
19) Structural Wood Member Adhesives: 140 g/L.
20) Single-Ply Roof Membrane Adhesives: 250 g/L.
21) Special-Purpose Contact Adhesives (That Are Used to Bond Melamine-Covered Board, Metal, Unsupported Vinyl, Rubber, or Wood Veneer 1/16 Inch or Less in Thickness to Any Surface): 250 g/L.
22) Top and Trim Adhesives: 250 g/L.
23) Plastic Cement Welding Compounds: 250 g/L.
24) ABS Welding Compounds: 325 g/L.
25) CPVC Welding Compounds: 490 g/L.
26) PVC Welding Compounds: 510 g/L.
27) Adhesive Primer for Plastic: 550 g/L.
28) Sheet-Applied Rubber Lining Adhesives: 850 g/L.
29) Aerosol Adhesive, General-Purpose Mist Spray: 65 percent by weight.
30) Aerosol Adhesive, General-Purpose Web Spray: 55 percent by weight.
31) Special-Purpose Aerosol Adhesives (All Types): 70 percent by weight.
32) Other Adhesives: 250 g/L.
33) Architectural Sealants: 250 g/L.
34) Nonmembrane Roof Sealants: 300 g/L.
35) Single-Ply Roof Membrane Sealants: 450 g/L.
36) Other Sealants: 420 g/L.
37) Sealant Primers for Nonporous Substrates: 250 g/L.
38) Sealant Primers for Porous Substrates: 775 g/L.
39) Modified Bituminous Sealant Primers: 500 g/L.
40) Other Sealant Primers: 750 g/L.

b. Product data for paints and coatings used inside the weatherproofing system. Products shall indicate VOC content and laboratory test reports showing compliance with requirements for low-emitting materials, including the requirements of the California

Environmental Chambers. Contractor shall provide documentation on VOC amounts for all materials used in the Work.

1) All adhesives and sealants wet-applied on site must meet the applicable chemical content requirements of SCAQMD Rule 1168, July 1, 2005, Adhesive and Sealant Applications, as analyzed by the methods specified in Rule 1168. The provisions of SCAQMD Rule 1168 do not apply to adhesives and sealants subject to state or federal consumer product VOC regulations.
2) Wood Glues: 30 g/L.
3) Metal-to-Metal Adhesives: 30 g/L.
4) Adhesives for Porous Materials (Except Wood): 50 g/L.
5) Subfloor Adhesives: 50 g/L.
6) Plastic Foam Adhesives: 50 g/L.
7) Carpet Adhesives: 50 g/L.
8) Carpet Pad Adhesives: 50 g/L.
9) VCT and Asphalt Tile Adhesives: 50 g/L.
10) Cove Base Adhesives: 50 g/L.
11) Gypsum Board and Panel Adhesives: 50 g/L.
12) Rubber Floor Adhesives: 60 g/L.
13) Ceramic Tile Adhesives: 65 g/L.
14) Multipurpose Construction Adhesives: 70 g/L.
15) Fiberglass Adhesives: 80 g/L.
16) Contact Adhesives: 80 g/L.
17) Structural Glazing Adhesives: 100 g/L.
18) Wood Flooring Adhesives: 100 g/L.
19) Structural Wood Member Adhesives: 140 g/L.
20) Single-Ply Roof Membrane Adhesives: 250 g/L.
21) Special-Purpose Contact Adhesives (That Are Used to Bond Melamine-Covered Board, Metal, Unsupported Vinyl, Rubber, or Wood Veneer 1/16 Inch or Less in Thickness to Any Surface): 250 g/L.
22) Top and Trim Adhesives: 250 g/L.
23) Plastic Cement Welding Compounds: 250 g/L.
24) ABS Welding Compounds: 325 g/L.
25) CPVC Welding Compounds: 490 g/L.
26) PVC Welding Compounds: 510 g/L.
27) Adhesive Primer for Plastic: 550 g/L.
28) Sheet-Applied Rubber Lining Adhesives: 850 g/L.
29) Aerosol Adhesive, General-Purpose Mist Spray: 65 percent by weight.
30) Aerosol Adhesive, General-Purpose Web Spray: 55 percent by weight.
31) Special-Purpose Aerosol Adhesives (All Types): 70 percent by weight.
32) Other Adhesives: 250 g/L.
33) Architectural Sealants: 250 g/L.
34) Nonmembrane Roof Sealants: 300 g/L.
35) Single-Ply Roof Membrane Sealants: 450 g/L.
36) Other Sealants: 420 g/L.
37) Sealant Primers for Nonporous Substrates: 250 g/L.
38) Sealant Primers for Porous Substrates: 775 g/L.
39) Modified Bituminous Sealant Primers: 500 g/L.
40) Other Sealant Primers: 750 g/L.

b. Product data for paints and coatings used inside the weatherproofing system. Products shall indicate VOC content and laboratory test reports showing compliance with requirements for low-emitting materials, including the requirements of the California

Department of Public Health (CDPH) Standard Method v1.1–2010, and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers. Also:

1) All paints and coatings wet-applied on site must meet the applicable VOC limits of the California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings, or the South Coast Air Quality Management District (SCAQMD) Rule 1113, effective June 3, 2011
2) Flat Paints and Coatings: 50 g/L.
3) Non-flat Paints and Coatings: 50 g/L.
4) Dry-Fog Coatings: 150 g/L.
5) Primers, Sealers, and Under coaters: 100 g/L.
6) Rust-Preventive Coatings: 100 g/L.
7) Zinc-Rich Industrial Maintenance Primers: 100 g/L.
8) Pretreatment Wash Primers: 420 g/L.
9) Clear Wood Finishes, Varnishes: 275 g/L.
10) Clear Wood Finishes, Lacquers: 275 g/L.
11) Floor Coatings: 50 g/L.
12) Shellacs, Clear: 730 g/L.
13) Shellacs, Pigmented: 550 g/L.
14) Stains: 100 g/L.

c. Laboratory test reports for flooring, indicating compliance with the requirements of the California Department of Public Health (CDPH) Standard Method v1.1–2010, and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers.

1) Laboratory test reports for products containing composite wood, agrifiber products or wood glues. Composite wood, as defined by the California Air Resources Board, Airborne Toxic Measure to Reduce Formaldehyde Emissions from Composite Wood Products Regulation, must be documented to have low formaldehyde emissions that meet the California Air Resources Board ATCM for formaldehyde requirements for ultra-low-emitting formaldehyde (ULEF) resins or no added formaldehyde resins.
2) Laboratory test reports for ceilings, walls, and thermal insulation (both interior and exterior), indicating compliance with the requirements of the California Department of Public Health (CDPH) Standard Method v1.1–2010, and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers.

PART 3 - EXECUTION

3.1 NONSMOKING BUILDING

A. Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes. Comply with Specification Section 01 35 46

3.2 CONSTRUCTION WASTE MANAGEMENT

A. Comply with Section 01 74 19 "Construction Waste Management and Disposal."

3.3 CONSTRUCTION IAQ MANAGEMENT

A. Comply with Specification Section 01 35 46 "Indoor Air Quality".

3.4 IAQ ASSESSMENT AND TESTING

A. Comply with Specification Section 01 35 46 "Indoor Air Quality".

END OF SECTION 01 81 13.14

3.2 CONSTRUCTION WASTE MANAGEMENT

A. Comply with Section 01 74 19 "Construction Waste Management and Disposal."

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A. Comply with Specification Section 01 35 46 "Indoor Air Quality".

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A. Comply with Specification Section 01 35 46 "Indoor Air Quality".

END OF SECTION 01 81 13.14

SECTION 01 91 13 - GENERAL COMMISSIONING REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section.

B. Owner's Project Requirements (OPR) and the Basis of Design (BOD) documentation are included by reference for information only.

C. Division 01 Section 01 81 13.14 Sustainable Design Requirements – LEED v4 BD+C for additional LEED v4 requirements related to commissioning.

D. ASHRAE standard 90.1-2010, ASHRAE Guidelines 0-2013 (The Commissioning Process) and 1.1-2007 (The HVAC Commissioning Process), ASHRAE Standard 202-2013 Commissioning Process for Buildings and Systems, and NIBS Guideline 3-2012 Building Enclosure Commissioning Process.

E. The project's Commissioning Plan (Cx Plan) (Construction Phase) will be developed and issued at the start of construction. The Cx Plan is a live document that is maintained by the Cx Authority; updated periodically during the course of the project, as required.

1.2 SUMMARY

A. Section includes general requirements that apply to implementation of commissioning without regard to specific systems, assemblies, or components.

B. Commissioning is systematic processes to provide documented confirmation that building systems perform according to the criteria set forth in the design intent and satisfy the owner's operational needs. This is achieved by beginning in the design phase and documenting design intent and continuing through construction, acceptance and the warranty period with actual verification of performance. The commissioning process shall encompass and coordinate the traditionally separate functions of system documentation, equipment startup, control system calibration, testing and balancing, performance testing and training. The Commissioning process shall comply with ASHRAE Guidelines 0-2013 and 1.1-2007.

C. Commissioning during the construction phase is intended to achieve the following specific objectives according to the Contract Documents:

1. Verify that applicable equipment and systems are installed according to the manufacturer's recommendations and to industry accepted minimum standards and that they receive adequate operational checkout by installing contractors.
2. Verify and document proper performance of equipment and systems.
3. Verify that O&M documentation left on site is complete.
4. Verify that the Owner's operating personnel are adequately trained.

D. The commissioning process does not take away from or reduce the responsibility of the system designers or installing contractors to provide a finished and fully functioning product.

E. Abbreviations. The following are common abbreviations used in the Specifications and in the Commissioning Plan. Definitions are found in Section 1.3.

A/E-	Architect and Design Engineers	FPT-	Functional Performance Test
BoD-	Basis of Design	MC–	Mechanical Contractor
BECxA-	Building Envelope Cx Authority	OPR-	Owner's Project Requirements
CxA-	Commissioning authority		
CxC-	Contractor's Commissioning Coordinators	OAR-	Owner's Authorized Representative
		VC-	Verification checklist (CVC)
Cx-	Commissioning	PM-	Project Manager (of the Owner)
GOAA-	Greater Orlando Aviation Authority	Subs-	Subcontractors to Contractor
		RFI-	Requests for Information
CC-	Controls Contractor	OIA-	Orlando International Airport
Cx Plan-	Commissioning Plan document	TAB-	Test and Balance contractor
EC-	Electrical contractor	LEED AP	USGBC LEED Administrator

F. Related Sections:

1. Division 01 Section on "Shop Drawings, Products and Samples" which defines documentation (product data, shop drawings, samples, etc.) to be submitted for review and approval. Contractor shall forward copies of all submittals related to commissioned systems to the CxA.
2. Division 01 Sections on "Field Test for Water Leakage" and "Structural Testing and Inspections" which define specific tests to be performed or witnessed by the Building Envelope Cx Authority (BECxA).
3. Division 01 Section on "Closeout Submittals" which defines substantial completion and functional completion, relative to commissioning. Contractor shall forward copies of final Test and Balance Report, completed Verification Checklists, as-build control (BAS) drawings, and approved fire alarm system testing report to the CxA.
4. Division 01 Section on "Demonstration and Training" defines Contractors' training requirements for the Owner's O&M and Facilities' personnel. Contractor shall forward copies of the training syllabuses and attendee sign-in sheets for each training session scheduled for the commissioned equipment and systems on the project to the CxA.
5. Division 01 Section on "Sustainable Design Requirements – LEED v4 BD+C" define the project team's requirements for complying with sustainable practices, including LEED requirements.
6. Division 01 Section "Facility Exterior Enclosure Commissioning" for commissioning activities associated with the building envelope; wall and roof assemblies, materials, and components.
7. Division 21 Section "Commissioning of Fire Suppression Systems" for commissioning process activities for fire suppression systems, assemblies, equipment, and components, including, but not limited to, fire pumps, jockey pumps, standpipes and sprinkler systems.
8. Division 22 Section "Commissioning of Plumbing Systems" for commissioning process activities for plumbing systems, assemblies, equipment, and components.
9. Division 23 Section "Commissioning of HVAC Systems" for commissioning process activities for HVAC&R systems, assemblies, equipment, and components.
10. Division 26 Section "Commissioning of Electrical Systems" for commissioning process activities for electrical systems, assemblies, equipment, and components.

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10. Division 26 Section "Commissioning of Electrical Systems" for commissioning process activities for electrical systems, assemblies, equipment, and components.

11. Division 28 Section "Commissioning of Life Safety and Security Systems" for commissioning process activities for fire detection and alarm, smoke control and stair pressurization, elevator recall and override, and security systems.

1.3 DEFINITIONS

A. Acceptance Phase. Phase of construction after startup and initial checkout when functional performance tests, O&M documentation review and training occurs.

B. Approval. Acceptance that a piece of equipment or system has been properly installed and is functioning in the tested modes according to the Contract Documents.

C. Architect/Engineer (A/E): The prime consultant (architect) and sub-consultants who comprise the design team, generally the HVAC mechanical designer/engineer and the electrical designer/engineer.

D. BECxA: Building Envelope Commissioning Authority. An independent agent, not otherwise associated with the A/E team members or the Contractor, hired by the Owner. The BECxA directs and coordinates the day-to-day commissioning activities associated with the building envelope components; such as, waterproofing, curtain wall, glazing, and roofing. The BECxA does not take an oversight role like the Contractor. The CxA is part of the Owner's Authorized Representative (OAR) team or shall report directly to the Owner.

E. BoD: Basis of Design. A document that records concepts, calculations, decisions, and product selections used to meet the OPR and to satisfy applicable regulatory requirements, standards, and guidelines. The document includes both narrative descriptions and lists of individual items that support the design process.

F. CxA: Commissioning Authority. An independent agent, not otherwise associated with the A/E team members or the Contractor, hired by the Owner. The CxA directs and coordinates the day-to-day commissioning activities. The CxA does not take an oversight role like the Contractor. The CxA is part of the Owner's Authorized Representative (OAR) team or shall report directly to the Owner.

G. Cx Plan: Commissioning Plan: A document that outlines the organization, schedule, allocation of resources, and documentation requirements of the commissioning process

H. Datalogging: Monitoring flows, currents, status, pressures, etc. of equipment using stand-alone dataloggers separate from the control system.

I. Deferred Functional Tests : FTs that are performed later, after substantial completion, due to partial occupancy, equipment, seasonal requirements, design or other site conditions that disallow the test from being performed.

J. Deficiency : A condition in the installation or function of a component, piece of equipment or system that is not in compliance with the Contract Documents (that is, does not perform properly or is not complying with the design intent)

K. Design Intent: A dynamic document that provides the explanation of the ideas, concepts and criteria that are considered to be very important to the owner. It is initially the outcome of the programming and conceptual design phases.

L. Design Narrative or Design Documentation: Sections of either the Design Intent or Basis of Design.

M. Factory Testing: Testing of equipment on-site or at the factory by factory personnel with an Owner's representative present.

N. Functional Performance Test (FPT) or (FT): Test of the dynamic function and operation of equipment and systems using manual (direct observation) or monitoring methods. Functional testing is the dynamic testing of systems (rather than just components) under full operation (e.g., the chiller pump is tested interactively with the chiller functions to see if the pump ramps up and down to maintain the differential pressure setpoint). Systems are tested under various modes, such as during low cooling or heating loads, high loads, component failures, unoccupied, varying outside air temperatures, fire alarm, power failure, etc. The systems are run through all the control system's sequences of operation and components are verified to be responding as the sequences state. Traditional air or water test and balancing (TAB) is not functional testing, in the commissioning sense of the word. TAB's primary work is setting up the system flows and pressures as specified, while functional testing is verifying that which has already been set up. The commissioning authority develops the functional test procedures in a sequential written form, coordinates, oversees and documents the actual testing, which is usually performed by the installing contractor or vendor. FTs are performed after pre-functional checklists and start-up are complete.

O. Indirect Indicators: Indicators of a response or condition, such as a reading from a control system screen reporting a damper to be 100% closed

P. Manual Test: Using hand-held instruments, immediate control system readouts or direct observation to verify performance (contrasted to analyzing monitored data taken over time to make the "observation").

Q. Monitoring: The recording of parameters (flow, current, status, pressure, etc.) of equipment operation using dataloggers or the trending capabilities of control systems.

R. Non-Compliance: See Deficiency.

S. Non-Conformance: See Deficiency.

T. Over-written Value: Writing over a sensor value in the control system to see the response of a system (e.g., changing the outside air temperature value from 50°F to 75°F to verify economizer operation). See also "Simulated Signal."

U. OPR: Owner's Project Requirements. A document that details the functional requirements of a project and the expectations of how it will be used and operated. These include Project goals, measurable performance criteria, cost considerations, benchmarks, success criteria, and supporting information.

V. Sampling: Functionally testing only a fraction of the total number of identical or near identical pieces of equipment.

W. Seasonal Performance Tests: FT that are deferred until the system(s) will experience conditions closer to their design conditions.

X. Simulated Condition: Condition that is created for the purpose of testing the response of a system (e.g., applying a hair blower to a space sensor to see the response in a VAV box).

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X. Simulated Condition: Condition that is created for the purpose of testing the response of a system (e.g., applying a hair blower to a space sensor to see the response in a VAV box).

Y. Simulated Signal: Disconnecting a sensor and using a signal generator to send an amperage, resistance or pressure to the transducer and DDC system to simulate a sensor value.

Z. Systems, Subsystems, Equipment, and Components: Where these terms are used together or separately, they shall mean "as-built" systems, subsystems, equipment, and components.

AA. Startup: The initial starting or activating of dynamic equipment, including executing prefunctional checklists.

BB. Subs: The subcontractors to the Contractor at Risk who provide and install building components and systems.

CC. Test Procedures: The step-by-step process which must be executed to fulfill the test requirements. The test procedures are developed by the CxA.

DD. Test Requirements: Requirements specifying what modes and functions, etc. shall be tested. The test requirements are not the detailed test procedures. The test requirements are specified in the Contract Documents

EE. Trending: Monitoring using the building control system.

FF. Vendor: Supplier of equipment.

GG. Verification Checklist (VC): A list of items to inspect and elementary component tests to conduct to verify proper installation of equipment, provided by the CxA to the Contractor & Subs. Verification checklists are primarily static inspections and procedures to prepare the equipment or system for initial operation (e.g., belt tension, oil levels OK, labels affixed, gages in place, sensors calibrated, etc.). However, some checklist items entail simple testing of the function of a component, a piece of equipment or system (such as measuring the voltage imbalance on a three phase pump motor). Verification checklists augment and are combined with the manufacturer's start-up checklist. Even without a commissioning process, contractors typically perform some, if not many, of the verification checklist items a commissioning authority will recommend. However, few contractors document in writing the execution of these checklist items. Therefore, for most equipment, the contractors execute the checklists on their own. The commissioning authority only requires that the procedures be documented in writing, and does not witness much of the verification checklisting, except for larger or more critical pieces of equipment.

HH. Warranty Period: Warranty period for entire project, including equipment components. Warranty begins at Substantial Completion and extends for at least one year, unless specifically noted otherwise in the Contract Documents and accepted submittals.

1.4 COORDINATION

A. Commissioning Team: The members of the commissioning team consist of the Commissioning Authority (CxA), the Building Envelope Commissioning Authority (BECxA), the Owner's Authorized Representative(s) (OAR), the designated representative of the owner's Contractor (including their Commissioning Coordinators (CxC)), the Architect and Design Engineers (particularly the Mechanical and Electrical Engineers), the Mechanical Contractor (MC), the Electrical Contractor (EC), the TAB contractor, the Controls Contractor (CC), any other installing subcontractors or suppliers of equipment. If known, the Owner's building or operator/engineer is also a member of the commissioning team.

B. Management: The CxA is hired by the Owner directly. The CxA directs and coordinates the commissioning activities and the reports to the OR. All members work together to fulfill their contracted responsibilities and meet the objectives of the Contract Documents.

C. Scheduling: The CxA will work with the Contractor according to established protocols to schedule the commissioning activities. The CxA will provide sufficient notice to the Contractor for scheduling commissioning activities. The Contractor will integrate all commissioning activities into the master schedule. All parties will address scheduling problems and make necessary notifications in a timely manner in order to expedite the commissioning process.

D. The CxA will provide the initial schedule of primary commissioning events at the commissioning scoping meeting. The Commissioning Plan—Construction Phase provides a format for this schedule. As construction progresses more detailed schedules are developed by the CxA. The Commissioning Plan also provides a format for detailed schedules.

1.5 COMMISSIONING PROCESS

A. Commissioning Plan: The Commissioning Plan – Construction Phase will be developed and provided prior to the start of construction. The commissioning plan provides guidance in the execution of the commissioning process. Just after the initial commissioning scoping meeting the CxA will update the plan which is then considered the "final" plan, though it will continue to evolve and expand as the project progresses. The Specifications will take precedence over the Commissioning Plan.

B. Commissioning Process: The following narrative provides a brief overview of the typical commissioning tasks during construction and the general order in which they occur.

1. Commissioning during construction begins with a scoping meeting conducted by the CxA where the commissioning process is reviewed with the OAR, the A/E, the Contractor and the Subcontractors.
2. Additional meetings will be required throughout construction, scheduled by the CxA with necessary parties attending, to plan, scope, coordinate, schedule future activities and resolve problems.
3. Equipment documentation is submitted to the CxA during normal submittals, including detailed start-up procedures.
4. The CxA works with the Contractor and the Subs in developing startup plans and startup documentation formats, including providing the Contractor and the Subs with Verification Checklists to be completed, prior to the startup process.
5. In general, the checkout and performance verification proceeds from simple to complex; from component level to equipment to systems and intersystem levels with Verification Checklists being completed before functional testing.
6. The Subcontractors, under the direction of Contractor, execute and document the Verification Checklists and perform startup and initial checkout. The CxA documents that the VC and startup were completed according to the approved plans. This may include the CxA witnessing start-up of selected equipment.
7. The CxA develops specific equipment and system Functional Performance Test procedures. The OAR, the A/E, the Contractor and the Subs review the test procedures.
8. The procedures are executed by the Contractor and the Subs, under the direction of, and documented by the CxA.
9. Items of non-compliance in material, installation or setup are corrected at the Sub's expense and the system retested.

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7. The CxA develops specific equipment and system Functional Performance Test procedures. The OAR, the A/E, the Contractor and the Subs review the test procedures.
8. The procedures are executed by the Contractor and the Subs, under the direction of, and documented by the CxA.
9. Items of non-compliance in material, installation or setup are corrected at the Sub's expense and the system retested.

10. The CxA and the A/E review the O&M documentation for completeness.
11. Commissioning is completed before Substantial Completion.
12. The CxA, the OAR and the A/E review, pre-approves and coordinates the training provided by the Contractor and the Subs and verifies that is was completed.
13. Deferred testing is conducted, as specified or required.

C. Cloud-based Web Application Software

1. For this project, the Cx Authority will be utilizing a cloud-based web application for managing the commissioning documentation associated with the project. A dedicated project site will be established and this web application will provide real time data and a single interface for all project team members to share information and collaborate effectively.
2. Commissioning documentation will be maintained on this site and secure access will be provided to all team members. Cx documentation will be maintained in an electronic format, with automatic synchronization with the cloud as it is updated. However, provisions will be provided to create PDF versions of select Cx files for printing.
3. Team members will be notified of updates to the site through e-mails on a regular basis (typically daily). Discrete commissioning files will not be e-mailed to the team. This system will require contractors and subcontractors to monitor Cx activities and documentation through the site, and will allow the use of tablet (or laptop) PCs when completing the checklists and addressing issues in the field, if desired. Tablets and/or laptop PCs will be the responsibility of the individual team members. Alternately, contractors may print paper versions of the checklists and forms for completion in the field. If paper forms are utilized, it will be the responsibility of the contractor to accurately update the system with the information gathered in the field on paper forms in a timely manner. Requirements for same (compatible operating systems and browsers) will be provided by the Cx Authority.
4. The Cx Authority will provide initial instruction on the use of this web application and answer questions at a Cx kick-off meeting. All contractors and subcontractors will be expected to have designated representatives from their firms available for training.

1.6 COMMISSIONING TEAM

A. Members Appointed by Contractor(s): Individuals, each having the authority to act on behalf of the entity he or she represents, explicitly organized to implement the commissioning process through coordinated action. The commissioning team shall consist of, but not be limited to, the Contractor, including Project superintendent, Commissioning coordinators, and subcontractors, installers, suppliers, and specialists deemed appropriate by the CxA.

B. Members Appointed by Owner:

1. CxA: The designated person, company, or entity that plans, schedules, and coordinates the commissioning team to implement the commissioning process. Owner will engage the CxA under a separate contract.
2. Representatives of the facility user and operation and maintenance personnel.
3. The Owners Representative.
4. Architect and Engineering design professionals.

1.7 OWNER'S RESPONSIBILITIES

A. Provide the OPR documentation with assistance from the A/E to the CxA for development of an OPR document.

B. Assign operation and maintenance personnel and schedule them to participate in commissioning team activities.

C. Provide the BoD documentation, prepared by A/E and approved by Owner, to the CxA for use in developing the; OPR, commissioning specifications, commissioning plan, systems manual, and assist with the operation and maintenance manuals, training plan.

D. Follow the Commissioning Plan.

E. Attend commissioning scoping meetings and additional meetings as necessary.

1.8 OWNER'S AUTHORIZED REPRESENTATIVE'S RESPONSIBILITIES

A. The Owner's Authorized Representative (OAR) shall represent the Owner during the commissioning process as follows:

1. Manage the contracts of the A/E, the CxA, and the Contractor.
2. Arrange for facility operating and maintenance personnel to attend various field commissioning activities and field training sessions according to the Commissioning Plan – Construction Phase.
3. Provide final approval for the completion of the commissioning work.
4. Ensure that any seasonal or deferred testing and any deficiency issues are addressed.
5. Follow the Commissioning Plan.
6. Attend commissioning scoping meetings and additional meetings as necessary.

1.9 ARCHITECT/ENGINEER'S (AE) RESPONSIBILITIES

A. The AE shall comply with the fullest extent with the latest edition of the GOAA Design Guidelines and Standards, including the latest Sustainability Management Plan, including all sections shall apply. The AE shall participate in and perform commissioning process activities including, but not limited to, the following:

1. Attend the commissioning scoping meeting and selected commissioning team meetings.
2. Perform normal submittal review and approve of the following documents; submittals, shop drawings, as-built drawing, O&M manual, etc., as contracted.
3. Provide all design narrative and sequence documentation requested by the CxA. The designers shall assist (along with the Contractor) in clarifying the operation and control of commissioned equipment in areas where the specifications, control drawings or equipment documentation is not sufficient for writing detailed testing procedures.
4. Respond to design and/or construction issues identified and assigned to them by the CxA and/or BECxA through the cloud-based Cx web application.
5. Coordinate resolution of system deficiencies identified during commissioning, according to the contract documents.

1.7 OWNER'S RESPONSIBILITIES

A. Provide the OPR documentation with assistance from the A/E to the CxA for development of an OPR document.

B. Assign operation and maintenance personnel and schedule them to participate in commissioning team activities.

C. Provide the BoD documentation, prepared by A/E and approved by Owner, to the CxA for use in developing the; OPR, commissioning specifications, commissioning plan, systems manual, and assist with the operation and maintenance manuals, training plan.

D. Follow the Commissioning Plan.

E. Attend commissioning scoping meetings and additional meetings as necessary.

1.8 OWNER'S AUTHORIZED REPRESENTATIVE'S RESPONSIBILITIES

A. The Owner's Authorized Representative (OAR) shall represent the Owner during the commissioning process as follows:

1. Manage the contracts of the A/E, the CxA, and the Contractor.
2. Arrange for facility operating and maintenance personnel to attend various field commissioning activities and field training sessions according to the Commissioning Plan – Construction Phase.
3. Provide final approval for the completion of the commissioning work.
4. Ensure that any seasonal or deferred testing and any deficiency issues are addressed.
5. Follow the Commissioning Plan.
6. Attend commissioning scoping meetings and additional meetings as necessary.

1.9 ARCHITECT/ENGINEER'S (AE) RESPONSIBILITIES

A. The AE shall comply with the fullest extent with the latest edition of the GOAA Design Guidelines and Standards, including the latest Sustainability Management Plan, including all sections shall apply. The AE shall participate in and perform commissioning process activities including, but not limited to, the following:

1. Attend the commissioning scoping meeting and selected commissioning team meetings.
2. Perform normal submittal review and approve of the following documents; submittals, shop drawings, as-built drawing, O&M manual, etc., as contracted.
3. Provide all design narrative and sequence documentation requested by the CxA. The designers shall assist (along with the Contractor) in clarifying the operation and control of commissioned equipment in areas where the specifications, control drawings or equipment documentation is not sufficient for writing detailed testing procedures.
4. Respond to design and/or construction issues identified and assigned to them by the CxA and/or BECxA through the cloud-based Cx web application.
5. Coordinate resolution of system deficiencies identified during commissioning, according to the contract documents.

6. Review and approve final as-built design intent documentation for inclusion in the O&M manuals. Review and approve the O&M manuals issued by the Contractor. Issue the approved O & M manuals to the CxA.
7. Coordinate resolution of design non-conformance and design deficiencies identified during warranty-period commissioning.
8. Participate in the resolution of non-compliance, non-conformance and design deficiencies identified during commissioning during warranty-period commissioning.

1.10 CONTRACTOR'S RESPONSIBILITIES

A. The Contractor shall participate in and perform commissioning process activities including, but not limited to the following:

1. Facilitate the coordination of the commissioning work by the CxA, with complete knowledge of commissioning activities which will be incorporated into the master construction project schedule.
2. Comply with all fundamental and enhanced commissioning requirements as required under LEED v4 BD+C, including providing input and all required documentation for LEED v4 certification of Cx activities, including, but not limited to: Current Facility Requirements, O&M Plan, Systems Manuals, Ongoing Commissioning Plan, and Final Commissioning Report.
3. Review and approve the final Commissioning Plan—Construction Phase.
4. Attend a commissioning scoping meeting and other commissioning team meetings.
5. Issue subcontractor submittals for A/E approval & CxA review.
6. Furnish a copy of all construction documents, addenda, requests for information, change orders and approved submittals and shop drawings related to commissioned equipment to the CxA.
7. Completing verification checklists and responding to issues identified by the CxA and/or BECxA. Note: For this project, the CxA and BECxA will be utilizing a cloud-based Cx web application for managing the commissioning documentation associated with the project.
8. Issue O & M manuals to A/E for approval within 45 days of approved submittals. A/E to issue to the O & M manuals to the CxA for review of design compliance.
9. Review and approve the Functional Performance test procedures submitted by the CxA, prior to testing.
10. Review commissioning progress, including: checklist progress, outstanding issues and deficiency reports. Report on status weekly.
11. Coordinate the resolution of non-compliance and design deficiencies identified in all phases of commissioning.
12. Coordinate with the CxA for resolution of issues recorded in the CxA Issues Log.
13. Review and accept construction Verification Checklists provided by the CxA.
14. Complete electronic construction Verification Checklists as work is completed and provide to the CxA. Complete commissioning process test procedures.
15. Include the cost of for coordinating commissioning with the CxA in the total contract price.
16. Coordinate the training of Owner personnel and provide the times and dates of training to the CxA.
17. Execute seasonal or deferred functional performance testing witnessed by the CxA to facilitate the Cx process.
18. Provide a list of final settings, setpoints, ranges, schedules, and / or trend logs required by the CxA.
19. Follow the Commissioning Plan throughout the entire project duration.

1.11 SUBCONTRACTOR'S RESPONSIBILITIES

A. Contractor shall assign representatives with expertise and authority to act on its behalf and shall schedule them to participate in and perform commissioning process activities including, but not limited to, the following:

1. Provide all requested submittal data, including detailed start-up procedures and specific responsibilities of the Owner to keep warranties in force.
2. Assist in completing verification checklists and responding to issues identified by the CxA and/or BECxA. Note: For this project, the CxA and BECxA will be utilizing a cloud-based Cx web application for managing the commissioning documentation associated with the project.
3. Assist in equipment testing per agreements with Contractor.
4. Include all special tools and instruments (only available from vendor, specific to a piece of equipment) required for testing equipment according to these Contract Documents in the base bid price to the Contractor, except for stand-alone data logging equipment that may be used by the CxA.
5. Provide information requested by CxA regarding equipment sequence of operation and testing procedures.
6. Review test procedures for equipment installed by factory representatives.
7. Follow the Commissioning Plan.
8. Attend commissioning scoping meetings and additional meetings as necessary.
9. From the red-line drawings, edit and update one-line diagrams developed as part of the design narrative documentation, and those provided by the vendor as shop drawings, for the BAS, central chilled and hot water systems, domestic HW systems, AHU systems, VAV systems, exhaust systems, fire suppression systems, normal and emergency power systems, and life safety and security systems.

1.12 EQUIPMENT SUPPLIERS' RESPONSIBILITIES

A. Contractor shall assign the equipment suppliers & representatives with expertise and authority to act on its behalf and shall schedule them to participate in and perform commissioning process activities including, but not limited to, the following:

1. Provide all requested submittal data, including detailed start-up procedures and specific responsibilities of the Owner to keep warranties in force.
2. Assist in equipment testing per agreements with Contractor and the Subs. Include all special tools and instruments (only available from vendor, specific to a piece of equipment) required for testing equipment according to these Contract Documents in the base bid price to the Contractor, except for stand-alone datalogging equipment that may be used by the CxA.
3. Through the Contractor and the Subcontractors they supply products to, analyze specified products and verify that the designer has specified the newest most updated equipment reasonable for this project's scope and budget.
4. Provide information requested by CxA regarding equipment sequence of operation and testing procedures.
5. Review test procedures for equipment installed by factory representatives.
6. Follow the Commissioning Plan.
7. Attend commissioning scoping meetings and additional meetings as necessary.

1.11 SUBCONTRACTOR'S RESPONSIBILITIES

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1. Provide all requested submittal data, including detailed start-up procedures and specific responsibilities of the Owner to keep warranties in force.
2. Assist in completing verification checklists and responding to issues identified by the CxA and/or BECxA. Note: For this project, the CxA and BECxA will be utilizing a cloud-based Cx web application for managing the commissioning documentation associated with the project.
3. Assist in equipment testing per agreements with Contractor.
4. Include all special tools and instruments (only available from vendor, specific to a piece of equipment) required for testing equipment according to these Contract Documents in the base bid price to the Contractor, except for stand-alone data logging equipment that may be used by the CxA.
5. Provide information requested by CxA regarding equipment sequence of operation and testing procedures.
6. Review test procedures for equipment installed by factory representatives.
7. Follow the Commissioning Plan.
8. Attend commissioning scoping meetings and additional meetings as necessary.
9. From the red-line drawings, edit and update one-line diagrams developed as part of the design narrative documentation, and those provided by the vendor as shop drawings, for the BAS, central chilled and hot water systems, domestic HW systems, AHU systems, VAV systems, exhaust systems, fire suppression systems, normal and emergency power systems, and life safety and security systems.

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1. Provide all requested submittal data, including detailed start-up procedures and specific responsibilities of the Owner to keep warranties in force.
2. Assist in equipment testing per agreements with Contractor and the Subs. Include all special tools and instruments (only available from vendor, specific to a piece of equipment) required for testing equipment according to these Contract Documents in the base bid price to the Contractor, except for stand-alone datalogging equipment that may be used by the CxA.
3. Through the Contractor and the Subcontractors they supply products to, analyze specified products and verify that the designer has specified the newest most updated equipment reasonable for this project's scope and budget.
4. Provide information requested by CxA regarding equipment sequence of operation and testing procedures.
5. Review test procedures for equipment installed by factory representatives.
6. Follow the Commissioning Plan.
7. Attend commissioning scoping meetings and additional meetings as necessary.

1.13 Cx AUTHORITY'S RESPONSIBILITIES

A. The CxA is not responsible for design concept, design criteria, compliance with codes, design or general construction scheduling, cost estimating, or construction management. The CxA may assist with problem-solving, non-conformance or deficiencies, but ultimately that responsibility resides with the Contractor and the A/E. The primary role of the CxA is to develop and coordinate the execution of a testing plan, observe and document performance—that systems are functioning in accordance with the documented design intent and in accordance with the Contract Documents. The Contractor & subcontractors will provide all tools or the use of tools to start, check-out and functionally test equipment and systems.

1. Coordinates and directs the commissioning activities using consistent protocols and forms, centralized documentation, clear and regular communications and consultations with all necessary parties, frequently updated timelines and schedules and technical expertise.
2. Coordinate the commissioning work and, with the Contractor & subcontractors, ensure that commissioning activities are being scheduled into the master schedule.
3. Revise, as necessary, the Commissioning Plan—Construction Phase.
4. Plan and conduct a commissioning scoping meeting and other commissioning meetings.
5. Request and review additional information required to perform commissioning tasks, including O&M materials, subcontractor start-up and checkout procedures.
6. Before startup, gather and review the current control sequences and interlocks and work with subcontractors and Design Engineers until sufficient clarity has been obtained, in writing, to be able to write detailed testing procedures.
7. Review and comment on normal Contractor submittals applicable to systems being commissioned for compliance with commissioning needs, concurrent with the A/E reviews / approvals.
8. Write and distribute pre-functional tests and checklists.
9. Develop an enhanced start-up and initial systems checkout plan with Contractor and the Subcontractors.
10. Perform site visits, as necessary, to observe component and system installations. Attends selected planning and job-site meetings to obtain information on construction progress. Review construction meeting minutes for revisions/substitutions relating to the commissioning process. Assist in resolving any discrepancies.
11. Witness representative HVAC piping test and flushing procedures, sufficient to be confident that proper procedures were followed. Document this testing and include the documentation in O&M manuals. Notify owner's representative of any deficiencies in results or procedures.
12. Witness representative ductwork testing and cleaning procedures, sufficient to be confident that proper procedures were followed. Document this testing and include the documentation in O&M manuals. Notify owner's representative of any deficiencies in results or procedures.
13. Approve pre-functional tests and checklist completion by reviewing pre-functional checklist reports and by selected site observation and spot checking.
14. Approve systems startup by reviewing start-up reports and by selected site observation.
15. Review TAB execution plan.
16. Oversee sufficient functional testing of the control system and approve it to be used for TAB, before TAB is executed.
17. Approve air and water systems balancing by spot testing, by reviewing completed reports and by selected site observation.
18. With necessary assistance and review from the Contractor and installing subcontractors, write the Functional Performance test procedures for equipment and systems. This may include energy management control system trending, stand-alone datalogger monitoring or manual functional testing. Submit to the A/E, and OAR for review and approval.
19. Analyze any functional performance trend logs and monitoring data to verify performance.

20. Coordinate, witness and approve manual functional performance tests performed by installing contractors. Coordinate retesting as necessary until satisfactory performance is achieved.
21. Maintain a master deficiency and resolution log and a separate testing record. Provide the Contractor with written progress reports and test results with recommended actions.
22. Witness performance testing of smoke control system interfaced with the HVAC systems, by others and all other owner contracted tests or tests by manufacturer's personnel over which the CxA may not have direct control. Document these tests and include this documentation in Commissioning Report.
23. Review equipment warranties to ensure that the Owner's responsibilities are clearly defined.
24. Oversee and review the training plan by the Contractor & subcontractors for the Owner's operating personnel.
25. Compile and maintain a commissioning record and building systems book(s).
26. Review the preparation of the O&M manuals, the CxA will issue comments to the A/E and the OAR.
27. Provide a final commissioning report to the Owner.
28. Coordinate and supervise required seasonal or deferred testing and deficiency corrections.
29. Return to the completed project site for a 10 month warranty review, prior to the 12 months warranty period and review with Owners facility staff the current building operation and the condition is performing in compliance with design intent of the project design and to ensure issues related to the original and seasonal commissioning are still intact. Also interview facility staff and identify problems or concerns they have operating the building as originally intended. Make suggestions for improvements and for recording these changes in the O&M manuals. Identify areas that may come under warranty or under the original construction contract. Assist facility staff in developing reports, documents and requests for services to remedy outstanding problems.

1.14 SYSTEMS TO BE COMMISSIONED

A. The following checked systems will be commissioned in this project.

Equipment and System	Applicable Specification Sections:	Equipment and System	Applicable Specification Sections:
Building Envelope		Small Capacity Split System Air Conditioners	23 08 00 and 23 81 26.13
Walls, glazing, roof assemblies, waterproofing and expansion joints	01 91 15 and all related sections	Fan Coil Units	23 08 00 and 23 82 19
Conveying Equipment		PCA Units and Specialties	23 08 00 and 23 90 00
Traction Elevators	14 21 00		
Hydraulic Elevators	14 24 00	Fire Suppression Systems	
Escalators	14 31 00	Commissioning of Fire Suppression Systems	21 08 00

20. Coordinate, witness and approve manual functional performance tests performed by installing contractors. Coordinate retesting as necessary until satisfactory performance is achieved.
21. Maintain a master deficiency and resolution log and a separate testing record. Provide the Contractor with written progress reports and test results with recommended actions.
22. Witness performance testing of smoke control system interfaced with the HVAC systems, by others and all other owner contracted tests or tests by manufacturer's personnel over which the CxA may not have direct control. Document these tests and include this documentation in Commissioning Report.
23. Review equipment warranties to ensure that the Owner's responsibilities are clearly defined.
24. Oversee and review the training plan by the Contractor & subcontractors for the Owner's operating personnel.
25. Compile and maintain a commissioning record and building systems book(s).
26. Review the preparation of the O&M manuals, the CxA will issue comments to the A/E and the OAR.
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Conveying Equipment		PCA Units and Specialties	23 08 00 and 23 90 00
Traction Elevators	14 21 00		
Hydraulic Elevators	14 24 00	Fire Suppression Systems	
Escalators	14 31 00	Commissioning of Fire Suppression Systems	21 08 00

Equipment and System	Applicable Specification Sections:	Equipment and System	Applicable Specification Sections:
HVAC Systems		Fire Suppression Standpipes	21 08 00 and 21 12 00
Common Motor Requirements for HVAC Equipment	23 08 00 and 23 05 13	Wet Pipe Sprinkler Systems	21 08 00 and 21 13 13
Variable Frequency Motor Controllers	23 08 00 and 23 05 14	Dry Pipe Sprinkler Systems	21 08 00 and 21 13 16
Control Wiring	23 08 00 and 23 05 18	Electric Drive, Centrifugal Fire Pumps	21 08 00 and 21 31 13
Meters and Gages for HVAC Piping	23 08 00 and 23 05 19	Plumbing Systems	
General Duty Valves for HVAC Piping	23 08 00 and 23 05 23	Commissioning of Plumbing Systems	22 08 00
Valves for PCA Piping	23 08 00 and 23 05 23.01	Domestic Water Piping and Domestic Water Piping Specialties	22 08 00, and 22 11 16, and 22 11 19
Air Control and Accessories	23 08 00 and 23 05 80	Domestic Water Pumps	22 08 00 and 22 11 23
Testing, Adjusting and Balancing for HVAC	230800 and 23 05 93	Domestic Water Packaged Booster Pumps	22 08 00 and 22 11 23.13
Commissioning of HVAC Systems	23 08 00	Sump Pumps	22 08 00 and 22 14 29
Instrumentation and Control for HVAC	23 08 00 and 23 09 00	Electric Domestic Water Heaters	22 08 00 and 22 33 00
Refrigerant Detection and Alarm	23 08 00 and 23 09 20	Natural Fuel Gas Systems - Plumbing	22 08 00 and 22 70 00
Facility Fuel Oil Piping	23 08 00 and 23 11 13	Electrical Systems	
Hydronic Piping	23 08 00 and 23 21 13	Power Systems Study with Arc Flash Analysis	26 08 00 and 26 05 73
PCA Hydronic Piping	23 08 00 and 23 21 13.01	Commissioning of Electrical Systems	26 08 00
Pre-insulated Underground Piping System	23 08 00 and 23 21 13.15	Demonstration of Completed Electrical Systems	26 08 00 and 26 08 03
Hydronic Piping Specialties	23 08 00 and 23 21 16	Tests and Performance Verification	26 08 00 and 26 08 13
Hydronic Pumps	23 08 00 and 23 21 23	Architectural Lighting Controls for Public Spaces	26 08 00 and 26 09 24
PCA Hydronic Pumps	23 08 00 and 23 21 23.01	Occupancy Sensors	26 08 00 and 26 09 24

Equipment and System	Applicable Specification Sections:	Equipment and System	Applicable Specification Sections:
HVAC Water Treatment	23 08 00 and 23 25 00	Network Lighting Controls	26 08 00 and 26 09 24
PCA Water Treatment	23 08 00 and 23 25 00.01	Medium Voltage Generator	26 08 00 and 26 32 18
Air Duct Accessories	23 08 00 and 23 33 00	Switchboards	26 08 00 and 26 24 13
Axial HVAC Fans	23 08 00 and 23 34 13	Electrical Metering and Monitoring	26 08 00 and 26 27 13
Centrifugal HVAC Fans	23 08 00 and 23 34 16	Demonstration of Completed Electrical Systems	26 08 00 and 01 79 00
HVAC Power Ventilators	23 08 00 and 23 34 23	Outdoor Engine Generator, Sub-Base Tank	26 08 00 and 26 32 18
Air Curtains	23 08 00 and 23 34 33	Medium Voltage Diesel Engine Driven Generator	26 08 00 and 26 32 18
Air Terminal Units	23 08 00 and 23 36 00	Static Uninterruptible Power Supply	26 08 00 and 26 33 53
Particulate Air Filtration	23 08 00 and 23 41 00	Automatic Transfer Switches	26 08 00 and 26 36 23
Heat Exchangers for PCA	23 08 00 and 23 57 00.01	Lightning Protection System	26 08 00 and 26 41 13
Centrifugal Water Chillers	23 08 00 and 23 64 16	Surge Protective Devices	26 08 00 and 26 43 00
PCA Centrifugal Water Chillers	23 08 00 and 23 64 16.01	Architectural Lighting Fixtures, Lamps, Ballasts for Public Spaces	26 08 00 and 26 50 10
Scroll Water Chiller	23 08 00 and 23 64 23	Interior Lighting	26 08 00 and 26 51 00
Packaged Cooling Towers	23 08 00 and 23 65 00	400- Hertz Frequency Converters	26 08 00 and 26 61 00
Air to Air Energy Recovery Unit	23 08 00 and 23 72 00	Electronic Safety and Security	
Modular Indoor Central-Station Air Handing Units	23 08 00 and 23 73 13	Physical Access Control System (SSI)	28 08 00 and 28 13 00
Dedicated Outdoor Air Units	23 08 00 and 23 74 33	Intrusion Detection System (SSI)	28 08 00 and 28 16 00
Computer Room Air Conditioners	23 08 00 and 23 81 23	Video Surveillance System (SSI)	28 08 00 and 28 23 00
Split System Air Conditioners	23 08 00 and 23 81 26	Addressable Fire Detection and Alarm	28 08 00 and 28 31 00

Equipment and System	Applicable Specification Sections:	Equipment and System	Applicable Specification Sections:
HVAC Water Treatment	23 08 00 and 23 25 00	Network Lighting Controls	26 08 00 and 26 09 24
PCA Water Treatment	23 08 00 and 23 25 00.01	Medium Voltage Generator	26 08 00 and 26 32 18
Air Duct Accessories	23 08 00 and 23 33 00	Switchboards	26 08 00 and 26 24 13
Axial HVAC Fans	23 08 00 and 23 34 13	Electrical Metering and Monitoring	26 08 00 and 26 27 13
Centrifugal HVAC Fans	23 08 00 and 23 34 16	Demonstration of Completed Electrical Systems	26 08 00 and 01 79 00
HVAC Power Ventilators	23 08 00 and 23 34 23	Outdoor Engine Generator, Sub-Base Tank	26 08 00 and 26 32 18
Air Curtains	23 08 00 and 23 34 33	Medium Voltage Diesel Engine Driven Generator	26 08 00 and 26 32 18
Air Terminal Units	23 08 00 and 23 36 00	Static Uninterruptible Power Supply	26 08 00 and 26 33 53
Particulate Air Filtration	23 08 00 and 23 41 00	Automatic Transfer Switches	26 08 00 and 26 36 23
Heat Exchangers for PCA	23 08 00 and 23 57 00.01	Lightning Protection System	26 08 00 and 26 41 13
Centrifugal Water Chillers	23 08 00 and 23 64 16	Surge Protective Devices	26 08 00 and 26 43 00
PCA Centrifugal Water Chillers	23 08 00 and 23 64 16.01	Architectural Lighting Fixtures, Lamps, Ballasts for Public Spaces	26 08 00 and 26 50 10
Scroll Water Chiller	23 08 00 and 23 64 23	Interior Lighting	26 08 00 and 26 51 00
Packaged Cooling Towers	23 08 00 and 23 65 00	400- Hertz Frequency Converters	26 08 00 and 26 61 00
Air to Air Energy Recovery Unit	23 08 00 and 23 72 00	Electronic Safety and Security	
Modular Indoor Central-Station Air Handing Units	23 08 00 and 23 73 13	Physical Access Control System (SSI)	28 08 00 and 28 13 00
Dedicated Outdoor Air Units	23 08 00 and 23 74 33	Intrusion Detection System (SSI)	28 08 00 and 28 16 00
Computer Room Air Conditioners	23 08 00 and 23 81 23	Video Surveillance System (SSI)	28 08 00 and 28 23 00
Split System Air Conditioners	23 08 00 and 23 81 26	Addressable Fire Detection and Alarm	28 08 00 and 28 31 00

PART 2 - PRODUCTS

2.1 TEST EQUIPMENT

A. All standard testing equipment required to perform startup and initial checkout and required functional performance testing shall be provided by the subcontractor for the equipment being tested. For example, the mechanical contractor of Division 23 shall ultimately be responsible for all standard testing equipment for the HVAC system and controls system in Division 23, except for equipment specific to and used by TAB in their commissioning responsibilities. Two-way radios shall be provided by the subcontractor.

B. Special equipment, tools and instruments (only available from vendor, specific to a piece of equipment) required for testing equipment, according to these Contract Documents shall be included in the base bid price to the Contractor and left on site, except for stand-alone datalogging equipment that may be used by the CxA.

C. All testing equipment shall be of sufficient quality and accuracy to test and/or measure system performance with the tolerances specified in the Specifications. If not otherwise noted, the following minimum requirements apply: Temperature sensors and digital thermometers shall have a certified calibration within the past year to an accuracy of 0.5°F and a resolution of + or - 0.1°F. Pressure sensors shall have an accuracy of + or - 2.0% of the value range being measured (not full range of meter) and have been calibrated within the last year. All equipment shall be calibrated according to the manufacturer's recommended intervals and when dropped or damaged. Calibration tags shall be affixed or certificates readily available.

D. Refer to Section 01 91 13, Part 3.5 E for details regarding equipment that may be required to simulate required test conditions.

PART 3 - EXECUTION

3.1 MEETINGS

A. Scoping Meeting: To be within 90 days of commencement of construction, the CxA will schedule, plan and conduct a commissioning scoping meeting with the entire commissioning team in attendance. Meeting minutes will be distributed to all parties by the CxA. Information gathered from this meeting will allow the CxA to revise the Commissioning Plan to its "final" version, which will also be distributed to all parties.

B. Miscellaneous Meetings: Other meetings will be planned and conducted by the CxA as construction progresses. These meetings will cover coordination, deficiency resolution and planning issues with Contractor & Subs. The CxA will plan these meetings and will minimize unnecessary time being spent by the Contractor's Subs. These meetings will be held monthly, until the final 3 months of construction when they may be held as frequently as one per week.

3.2 REPORTING

A. The CxA will provide regular reports to the Contractor and the OAR, with increasing frequency as construction and commissioning progresses. Standard forms are provided and referenced in the Commissioning Plan.

B. The CxA will regularly communicate with all members of the commissioning team, keeping them apprised of commissioning progress and scheduling changes through memos, progress reports, etc.

C. Testing or review approvals and non-conformance and deficiency reports are made regularly with the review and testing as described in later sections.

D. A final summary report (about four to six pages, not including backup documentation) by the CxA will be provided to the Contractor and the OAR, focusing on evaluating commissioning process issues and identifying areas where the process could be improved. All acquired documentation, logs, minutes, reports, deficiency lists, communications, findings, unresolved issues, etc., will be compiled in appendices and provided with the summary report. Verification Checklist, Functional Performance tests and monitoring reports will not be part of the final report, but will be stored in the Commissioning Record in the O&M manuals.

E. The sample reports included in the Commissioning Plan are to provide the Contractor and the Subcontractors with an example of a format and an indication of the rigor of the required documentation for various report types.

3.3 SUBMITTALS

A. The CxA will provide appropriate contractors with a specific request for the type of submittal documentation the CxA requires to facilitate the commissioning work. These requests will be integrated into the normal submittal process and protocol of the construction team. At minimum, the request will include the manufacturer and model number, the manufacturer's printed installation and detailed start-up procedures, full sequences of operation, O&M data, performance data, any performance test procedures, control drawings and details of owner contracted tests. In addition, the installation and checkout materials that are actually shipped inside the equipment and the actual field checkout sheet forms to be used by the factory or field technicians shall be submitted to the Commissioning authority. All documentation requested by the CxA will be included by the Subs in their O&M manual contributions.

1. Requested Submittals:

   a. Air Handling Units – Modular Central Station
   b. Air Terminal Units
   c. Air-to-Air Energy Recovery
   d. Building Automation System (DDC Temperature Controls)
   e. Centrifugal Water Chillers
   f. Computer Room Air Conditioners
   g. Cooling Tower(s)
   h. Dedicated Outdoor Air Units
   i. Domestic Water Heaters - Electric
   j. Domestic Water Pumps
   k. Ductwork Insulation

3.2 REPORTING

A. The CxA will provide regular reports to the Contractor and the OAR, with increasing frequency as construction and commissioning progresses. Standard forms are provided and referenced in the Commissioning Plan.

B. The CxA will regularly communicate with all members of the commissioning team, keeping them apprised of commissioning progress and scheduling changes through memos, progress reports, etc.

C. Testing or review approvals and non-conformance and deficiency reports are made regularly with the review and testing as described in later sections.

D. A final summary report (about four to six pages, not including backup documentation) by the CxA will be provided to the Contractor and the OAR, focusing on evaluating commissioning process issues and identifying areas where the process could be improved. All acquired documentation, logs, minutes, reports, deficiency lists, communications, findings, unresolved issues, etc., will be compiled in appendices and provided with the summary report. Verification Checklist, Functional Performance tests and monitoring reports will not be part of the final report, but will be stored in the Commissioning Record in the O&M manuals.

E. The sample reports included in the Commissioning Plan are to provide the Contractor and the Subcontractors with an example of a format and an indication of the rigor of the required documentation for various report types.

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   g. Cooling Tower(s)
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   i. Domestic Water Heaters - Electric
   j. Domestic Water Pumps
   k. Ductwork Insulation

l. Elevators and escalators
m. Engine Generator(s)
n. Fan Coil Units
o. Fire Pump
p. HVAC Fans
q. Hydronic Pumps
r. Lift-Net and Power Xpert Systems
s. Lift Station
t. Lighting Controls, including occupancy sensors
u. Particulate Air Filtration
v. Pipe Insulation
w. Scroll Water Chillers
x. Split DX System Air Conditioners
y. Sump Pumps
z. Testing, Adjusting, and Balancing
aa. Transfer Switches (Automatic and Non-Automatic)
bb. Unit Heaters
cc. Variable Frequency / Variable Speed Drives
dd. Water Treatment

2. Requested Shop Drawings:

a. BAS / Temperature Control Shop Drawings
b. Campus and Building Distribution Piping
c. Ductwork
d. Fire Alarm System
e. Fire Protection Standpipe and Sprinkler Systems
f. Lighting Control System
g. Security access control system
h. Power Systems Coordination Study and Arc Flash Analysis
i. Water treatment systems
j. Video Surveillance System

B. The Commissioning authority will review and provide comment on submittals related to the commissioned equipment for conformance to the Contract Documents as it relates to the commissioning process, to the functional performance of the equipment and adequacy for developing test procedures. This review is intended primarily to aid in the development of functional testing procedures and only secondarily to verify compliance with equipment specifications. The Commissioning authority will notify the Contractor, Owner Representative, or A/E as requested, of items missing or areas that are not in conformance with Contract Documents and which require resubmission.

C. The CxA may request additional design narrative from the A/E and Controls Contractor, depending on the completeness of the design intent documentation and sequences provided with the Specifications.

D. These submittals to the CxA do not constitute compliance for O&M manual documentation. The O&M manuals are the responsibility of the Contractor, though the CxA will review them.

E. Contractor responsibility for deviations in submittals from requirements of the Contract Documents is not relieved by the Commissioning Authority's review.

3.4 START-UP, VERIFICATION CHECKLISTS AND INITIAL CHECKOUT

A. The following procedures apply to all equipment to be commissioned, according to Section 1.14, Systems to be Commissioned. Some systems that are not comprised so much of actual dynamic machinery, e.g., electrical system power quality, may have very simplified PCs and startup.

B. General. Verification Checklists are important to ensure that the equipment and systems are hooked up and operational. It ensures that Functional Performance Testing (in-depth system checkout) may proceed without unnecessary delays. Each piece of equipment receives full prefunctional checkout. No sampling strategies are used. The prefunctional testing for a given system must be successfully completed prior to formal functional performance testing of equipment or subsystems of the given system.

C. Start-up and Initial Checkout Plan. The CxA shall assist the commissioning team members responsible for startup of any equipment in developing detailed start-up plans for all equipment. The primary role of the CxA in this process is to ensure that there is written documentation that each of the manufacturer-recommended procedures have been completed. Parties responsible for prefunctional checklists and startup are identified in the commissioning scoping meeting and in the checklist forms. Contractor, subcontractors and manufacturer's technicians shall be responsible for executing Functional Performance Tests for their representative equipment and systems.

1. The CxA develops the Verification Checklists for all equipment and/or systems to be commissioned and delivers the VC, (via upload to the cloud-based CxAlloy site) to the Contractor for completion. These VC indicate required procedures to be executed as part of startup and initial checkout of the systems and the party responsible for their execution.
2. These VC and tests are provided by the CxA to the Contractor. The Contractor determines which trade is responsible for executing and documenting each of the line item tasks and assigns same to that subcontractor. Each form will have more than one trade responsible for its execution.
3. The subcontractor responsible for the purchase of the equipment develops the full start-up plan by combining (or adding to) the CxA's checklists with the manufacturer's detailed start-up and checkout procedures from the O&M manual and the normally used field checkout sheets. The plan will include checklists and procedures with specific boxes or lines for recording and documenting the checking and inspections of each procedure and a summary statement with a signature block at the end of the plan. The full start-up plan could consist of something as simple as:

    a. The CxA's Verification Checklists.
    b. The manufacturer's standard written start-up procedures copied from the installation manuals with check boxes by each procedure and a signature block added by hand at the end.
    c. The manufacturer's normally used field checkout sheets.

4. The subcontractor submits the full startup plan to the Contractor & CxA for review and approval.
5. The CxA reviews and approves the procedures and the format for documenting them, noting any procedures that need to be added.
6. The full start-up procedures and the approval form may be provided to the Contractor for review and approval, depending on management protocol.

D. Sensor and Actuator Calibration.

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    c. The manufacturer's normally used field checkout sheets.

4. The subcontractor submits the full startup plan to the Contractor & CxA for review and approval.
5. The CxA reviews and approves the procedures and the format for documenting them, noting any procedures that need to be added.
6. The full start-up procedures and the approval form may be provided to the Contractor for review and approval, depending on management protocol.

D. Sensor and Actuator Calibration.

1. All field-installed temperature, relative humidity, CO2 and pressure sensors and gages, and all actuators (dampers and valves) on all equipment shall be calibrated using the methods described below. Alternate methods may be used, if approved by the Owner before-hand. All test instruments shall have had a certified calibration within the last 12 months. Sensors installed in the unit at the factory with calibration certification provided need not be field calibrated.
2. All procedures used shall be fully documented on the prefunctional checklists or other suitable forms, clearly referencing the procedures followed and written documentation of initial, intermediate and final results.
3. Sensor Calibration Methods.

    a. All Sensors. Verify that all sensor locations are appropriate and away from causes of erratic operation. Verify that sensors with shielded cable, are grounded only at one end. For sensor pairs that are used to determine a temperature or pressure difference, make sure they are reading within 0.2°F of each other for temperature and within a tolerance equal to 2% of the reading, of each other, for pressure. Tolerances for critical applications may be tighter.
    b. Sensors Without Transmitters--Standard Application. Make a reading with a calibrated test instrument within 6 inches of the site sensor. Verify that the sensor reading (via the permanent thermostat, gage or building automation system (BAS)) is within the tolerances in the table below of the instrument-measured value. If not, install offset in BAS, calibrate or replace sensor.
    c. Sensors With Transmitters--Standard Application. Disconnect sensor. Connect a signal generator in place of sensor. Connect ammeter in series between transmitter and BAS control panel. Using manufacturer's resistance-temperature data, simulate minimum desired temperature. Adjust transmitter potentiometer zero until 4 mA is read by the ammeter. Repeat for the maximum temperature matching 20 mA to the potentiometer span or maximum and verify at the BAS. Record all values and recalibrate controller as necessary to conform with specified control ramps, reset schedules, proportional relationship, reset relationship and P/I reaction. Reconnect sensor. Make a reading with a calibrated test instrument within 6 inches of the site sensor. Verify that the sensor reading (via the permanent thermostat, gage or building automation system (BAS)) is within the tolerances in the table below of the instrument-measured value. If not, replace sensor and repeat. For pressure sensors, perform a similar process with a suitable signal generator.
    d. Critical Applications. For critical applications (process, manufacturing, etc.) more rigorous calibration techniques may be required for selected sensors. Describe any such methods used on an attached sheet.

Tolerances, Standard Applications

Sensor	Required Tolerance (+/-)	Sensor	Required Tolerance (+/-)
Cooling coil, chilled water temps	0.4°F	Flow rates, water	4% of design
		Relative humidity	4% of design
AHU wet bulb or dew point	2.0°F	Oxygen or CO_2 monitor	0.1 % pts
Hot water coil water temp	1.5°F	Barometric pressure	0.1 in. of Hg
Outside air, space air, duct air temps	0.4°F	Pressures, air, water	3% of design
Watthour, voltage & amperage	1% of design	Flow rates, air	10% of design

4. Valve and Damper Stroke Setup and Check.

a. EMS Readout. For all valve and damper actuator positions checked, verify the actual position against the BAS readout.
b. Set pumps or fans to normal operating mode. Command valve or damper closed, visually verify that valve or damper is closed and adjust output zero signal as required. Command valve or damper open, verify position is full open and adjust output signal as required. Command valve or damper to a few intermediate positions. If actual valve or damper position doesn't reasonably correspond, replace actuator or add pilot positioner (for pneumatics).

5. Closure for heating coil valves (NO): Set heating setpoint 20°F above room temperature. Observe valve open. Remove control air or power from the valve and verify that the valve stem and actuator position do not change. Restore to normal. Set heating setpoint to 20°F below room temperature. Observe the valve close. Restore to normal.
6. Closure for cooling coil valves (NC): Set cooling setpoint 20°F above room temperature. Observe the valve close. Remove control air or power from the valve and verify that the valve stem and actuator position do not change. Restore to normal. Set cooling setpoint to 20°F below room temperature. Observe valve open. Restore to normal.

E. Execution of Verification Checklists and Startup.

1. Four weeks prior to startup, the Contractor and the Subcontractors and vendors schedule startup and checkout with the CxA. The performance of the prefunctional checklists, startup and checkout are directed and executed by the Contractor and the Subcontractor or vendor. When checking off prefunctional checklists, signatures may be required by the Contractor and/or their Subs for verification of completion of their work.
2. The CxA shall observe, at minimum, the procedures for each piece of primary equipment, unless there are multiple units, (in which case a sampling strategy may be used as approved by the Contractor). In no case will the number of units witnessed be less than four, nor less than 20% of the total number of identical or very similar units.
3. For lower-level components of equipment, (e.g., VAV boxes, sensors, controllers), the CxA shall observe a sampling of the prefunctional and start-up procedures. The sampling procedures are identified in the commissioning plan.
4. The Contractor and the Subcontractors and vendors shall execute startup and provide the CxA with a signed and dated copy of the completed start-up and prefunctional tests and checklists.
5. Only individuals that have direct knowledge and witnessed that a line item task on the prefunctional checklist was actually performed shall initial or check that item off. It is not acceptable for witnessing supervisors to fill out these forms.

F. Deficiencies, Non-Conformance and Approval in Checklists and Startup.

1. The Contractor and the Subs shall clearly list any outstanding items of the initial start-up and prefunctional procedures that were not completed successfully, at the bottom of the procedures form or on an attached sheet. The procedures form and any outstanding deficiencies are provided to the CxA within two days of test completion.
2. The CxA reviews the report and submits either a non-compliance report or an approval form to the Contractor and the Sub. The CxA shall work with the Contractor and the Subs and vendors to correct and retest deficiencies or uncompleted items. The CxA will involve the Contractor and the Subs as necessary. The installing Subs or vendors shall correct all areas that are deficient or incomplete in the checklists and tests in a timely manner, and shall notify the Contractor and the CxA as soon as outstanding items have been corrected and resubmit an updated start-up report and a Statement of Correction on the original non-compliance

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report. When satisfactorily completed, the CxA recommends approval of the execution of the checklists and startup of each system to the Contractor using a standard form.

3. Items left incomplete, which later cause deficiencies or delays during functional testing may result in back charges to the responsible party. Refer to Part 3.7 herein for details.

3.5 FUNCTIONAL PERFORMANCE TESTING

A. This sub-section applies to all commissioning functional testing for all divisions.

B. The general list of equipment to be commissioned is found in Section 01 91 13, Part 1.14. The specific system Functional Performance Tests (with required modes and sequences to be tested) will be developed after complete review of the control shop drawings and discussion with the Engineer-of-Record.

C. The parties responsible to execute each test are Contractor's installing subcontractors and associated vendors, manufacturer's representatives and technicians.

D. Objectives and Scope. The objective of Functional Performance Testing is to demonstrate that each system is operating according to the documented design intent and Contract Documents. Functional testing facilitates bringing the systems from a state of substantial completion to full dynamic operation. Additionally, during the testing process, areas of deficient performance are identified and corrected, improving the operation and functioning of the systems.

1. In general, each system should be operated through all modes of operation (seasonal, occupied, unoccupied, warm-up, cool-down, part- and full-load) where there is a specified system response. Verifying each sequence in the sequences of operation is required. Proper responses to such modes and conditions as power failure, freeze condition, no flow, equipment failure, etc. shall also be tested.
2. Development of Test Procedures. Before test procedures are written, the CxA shall obtain all requested documentation and a current list of change orders affecting equipment or systems, including an updated points list, program code, control sequences and parameters. The CxA shall develop specific test procedures and forms to verify and document proper operation of each piece of equipment and system. The Contractor's Sub or vendor responsible to execute a test, shall provide assistance to the CxA in developing the procedures review (answering questions about equipment, operation, sequences, etc.). Prior to execution, the CxA shall provide a copy of the test procedures to the Contractor and the Sub(s) who shall review the tests for feasibility, safety, equipment and warranty protection. The CxA will submit the tests to the A/E and the OAR for review.
3. The CxA shall review owner-contracted, factory testing or required owner acceptance tests which the CxA is not responsible to oversee, including documentation format, and shall determine what further testing or format changes may be required to comply with the Specifications. Redundancy of testing shall be minimized.
4. The purpose of any given specific test is to verify and document compliance with the stated criteria of acceptance given on the test form.
5. The test procedure forms developed by the CxA shall include (but not be limited to) the following information:

    a. System and equipment or component name(s)
    b. Equipment location and ID number
    c. Unique test ID number, and reference to unique prefunctional checklist and start-up documentation ID numbers for the piece of equipment

d. Date
e. Project name
f. Participating parties
g. A copy of the specification section describing the test requirements
h. A copy of the specific sequence of operations or other specified parameters being verified
i. Formulas used in any calculations
j. Required pre-test field measurements
k. Instructions for setting up the test.
l. Special cautions, alarm limits, etc.
m. Specific step-by-step procedures to execute the test, in a clear, sequential and repeatable format
n. Acceptance criteria of proper performance with a Yes / No check box to allow for clearly marking whether or not proper performance of each part of the test was achieved.
o. A section for comments
p. Signatures and date block for the CxA

E. Test Methods.

1. Functional Performance Testing and verification may be achieved by manual testing (persons manipulate the equipment and observe performance) or by monitoring the performance and analyzing the results using the control system's trend log capabilities or by stand-alone dataloggers. The final Functional Performance Test protocols, as developed by the CxA, shall specify which methods shall be used for each test. The CxA may substitute specified methods or require an additional method to be executed, other than what was specified, with the approval of the Contractor. This may require a change order and adjustment in charge to the Owner. The CxA will determine which method is most appropriate for tests that do not have a method specified.
2. Note: Commissioning functional performance testing for HVAC and related systems associated with the building automation system (BAS) will NOT be conducted through the Java Application Control Engine (JACE) controller. All Cx functional performance testing will be conducted through the BAS front end under the direction of the Cx Authority and the BAS controls contractor.
3. Simulated Conditions. Simulating conditions (not by an overwritten value) shall be allowed, though timing the testing to experience actual conditions is encouraged wherever practical.
4. Overwritten Values. Overwriting sensor values to simulate a condition, such as overwriting the outside air temperature reading in a control system to be something other than it really is, shall be allowed, but shall be used with caution and avoided when possible. Such testing methods often can only test a part of a system, as the interactions and responses of other systems will be erroneous or not applicable. Simulating a condition is preferable. e.g., for the above case, by heating the outside air sensor with a hair blower rather than overwriting the value or by altering the appropriate setpoint to see the desired response. Before simulating conditions or overwriting values, sensors, transducers and devices shall have been calibrated.
5. Simulated Signals. Using a signal generator which creates a simulated signal to test and calibrate transducers and DDC constants is generally recommended over using the sensor to act as the signal generator via simulated conditions or overwritten values.
6. Altering Setpoints. Rather than overwriting sensor values, and when simulating conditions is difficult, altering setpoints to test a sequence is acceptable. For example, to see the AHU lockout work at an outside air temperature below 55°F, when the outside air temperature is above 55°F, temporarily change the lockout setpoint to be 2°F above the current outside air temperature.

d. Date
e. Project name
f. Participating parties
g. A copy of the specification section describing the test requirements
h. A copy of the specific sequence of operations or other specified parameters being verified
i. Formulas used in any calculations
j. Required pre-test field measurements
k. Instructions for setting up the test.
l. Special cautions, alarm limits, etc.
m. Specific step-by-step procedures to execute the test, in a clear, sequential and repeatable format
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7. Indirect Indicators. Relying on indirect indicators for responses or performance shall be allowed only after visually and directly verifying and documenting, over the range of the tested parameters, that the indirect readings through the control system represent actual conditions and responses. Much of this verification is completed during prefunctional testing.
8. Setup. Each function and test shall be performed under conditions that simulate actual conditions as close as is practically possible. The Sub executing the test shall provide all necessary materials, system modifications, etc. to produce the necessary flows, pressures, temperatures, etc. necessary to execute the test according to the specified conditions. At completion of the test, the Sub shall return all affected building equipment and systems, due to these temporary modifications, to their pre-test condition.
9. Sampling. Multiple identical pieces of non-life-safety or otherwise non-critical equipment may be functionally tested using a sampling strategy. Significant application differences and significant sequence of operation differences in otherwise identical equipment invalidates their common identity. A small size or capacity difference, alone, does not constitute a difference. The specific recommended sampling rates for each type of equipment will be dictated by the CxA. It is noted that no sampling by Contractor's Subs is allowed in prefunctional checklist execution.

    a. A common sampling strategy referenced in the Specifications as the "xx% Sampling—yy% Failure Rule" is defined by the following example.

       xx = the percent of the group of identical equipment to be included in each sample.

       yy = the percent of the sample that if failing, will require another sample to be tested.

    b. The example below describes a 20% Sampling—10% Failure Rule.

        1) Randomly test at least 20% (xx) of each group of identical equipment. In no case test less than three units in each group. This 20%, or three, constitute the "first sample."
        2) If 10% (yy) of the units in the first sample fail the functional performance tests, test another 20% of the group (the second sample).
        3) If 10% of the units in the second sample fail, test all remaining units in the whole group.
        4) If at any point, frequent failures are occurring and testing is becoming more troubleshooting than verification, the CxA may stop the testing and require the responsible Sub to perform and document a checkout of the remaining units, prior to continuing with functionally testing the remaining units.

F. Coordination and Scheduling. The Contractor & Subs shall provide sufficient notice to the CxA regarding their completion schedule for the prefunctional checklists and startup of all equipment and systems. The CxA will schedule Functional Performance Tests through the Contractor & Subs. The CxA shall direct, witness and document the Functional Performance Tests of all equipment and systems. The Contractor & Subs shall execute the tests.

1. In general, Functional Performance Testing is conducted after prefunctional testing and startup has been satisfactorily completed. The control system is sufficiently tested and approved by the CxA before it is used for TAB or to verify performance of other components or systems. The air balancing and water balancing is completed and debugged before functional testing of air-related or water-related equipment or systems. Testing proceeds from components to subsystems to systems. When the proper performance of all interacting individual systems has been achieved, the interface or coordinated responses between systems is checked.

G. Test Equipment. Refer to Section 01 91 13, Part 2 for test equipment requirements.

H. Problem Solving. The CxA will recommend solutions to problems found, however the burden of responsibility to solve, correct and retest problems is with the Contractor & Subs and A/E.

3.6 DOCUMENTATION, NON-CONFORMANCE AND APPROVAL OF TESTS

A. Documentation. The CxA shall witness and document the results of all Functional Performance Tests using the specific procedural forms developed for that purpose. Prior to testing, these forms are provided to the Contractor for review and approval, the Contractor shall issue to the Subs for execution. The CxA will include the filled out and executed forms in the O&M manuals.

B. Non-Conformance.

1. The CxA will record the results of the Functional Performance Test on the procedure or test form. All deficiencies or non-conformance issues shall be noted and reported to the Contractor on a standard non-compliance form.
2. Corrections of minor deficiencies identified may be made during the tests at the discretion of the CxA. In such cases the deficiency and resolution will be documented on the procedure form.
3. Every effort will be made to expedite the testing process and minimize unnecessary delays, while not compromising the integrity of the procedures. However, the CxA will not be pressured into overlooking deficient work or loosening acceptance criteria to satisfy scheduling or cost issues, unless there is an overriding reason to do so at the request of the Contractor.
4. As tests progress and a deficiency is identified, the CxA discusses the issue with the Contractor & Subs.

    a. When there is no dispute on the deficiency and the Contractor & Sub accepts responsibility to correct it:

        1) The CxA documents the deficiency and the Sub's response and intentions and they go on to another test or sequence. After the day's work, the CxA submits the non-compliance reports to the Contractor for signature. A copy is provided to the Sub and CxA. The Sub corrects the deficiency, signs the statement of correction at the bottom of the non-compliance form certifying that the equipment is ready to be retested and sends it back to the CxA.
        2) The CxA reschedules the test and the test is repeated.

    b. If there is a dispute about a deficiency, regarding whether it is a deficiency or who is responsible:

        1) The deficiency shall be documented on the non-compliance form with the Sub's response and a copy given to the Contractor and to the Sub representative assumed to be responsible.
        2) Resolutions are made at the lowest management level possible. Other parties are brought into the discussions as needed. Final interpretive authority is with the A/E and the OAR. Final acceptance authority is with the Project Manager.
        3) The CxA documents the resolution process.
        4) Once the interpretation and resolution have been decided, the appropriate party corrects the deficiency, signs the statement of correction on the non-compliance

G. Test Equipment. Refer to Section 01 91 13, Part 2 for test equipment requirements.

H. Problem Solving. The CxA will recommend solutions to problems found, however the burden of responsibility to solve, correct and retest problems is with the Contractor & Subs and A/E.

3.6 DOCUMENTATION, NON-CONFORMANCE AND APPROVAL OF TESTS

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4. As tests progress and a deficiency is identified, the CxA discusses the issue with the Contractor & Subs.

a. When there is no dispute on the deficiency and the Contractor & Sub accepts responsibility to correct it:

1) The CxA documents the deficiency and the Sub's response and intentions and they go on to another test or sequence. After the day's work, the CxA submits the non-compliance reports to the Contractor for signature. A copy is provided to the Sub and CxA. The Sub corrects the deficiency, signs the statement of correction at the bottom of the non-compliance form certifying that the equipment is ready to be retested and sends it back to the CxA.
2) The CxA reschedules the test and the test is repeated.

b. If there is a dispute about a deficiency, regarding whether it is a deficiency or who is responsible:

1) The deficiency shall be documented on the non-compliance form with the Sub's response and a copy given to the Contractor and to the Sub representative assumed to be responsible.
2) Resolutions are made at the lowest management level possible. Other parties are brought into the discussions as needed. Final interpretive authority is with the A/E and the OAR. Final acceptance authority is with the Project Manager.
3) The CxA documents the resolution process.
4) Once the interpretation and resolution have been decided, the appropriate party corrects the deficiency, signs the statement of correction on the non-compliance

form and provides it to the CxA. The CxA reschedules the test and the test is repeated until satisfactory performance is achieved.

c. Cost of Retesting.

1) The cost for the Sub to retest a prefunctional or functional test, if they are responsible for the deficiency, shall be theirs. If they are not responsible, any cost recovery for retesting costs shall be negotiated with the Contractor.
2) For a deficiency identified, not related to any prefunctional checklist or start-up fault, the following shall apply: The CxA and Contractor will direct the retesting of the equipment once at no "charge" to the Subs for their time. However, the CxA's and Contractor's time for a second retest will be charged to the Subs.
3) The time for the CxA and Contractor to direct any retesting required because a specific prefunctional checklist or start-up test item, reported to have been successfully completed, but determined during functional testing to be faulty, will be backcharged to the Subs.
4) Refer to the sampling section of Section 01 91 13, Part 3.6 for requirements for testing and retesting identical equipment.

5. The Contractor & Subs shall respond in writing to the CxA at least as often as commissioning meetings are being scheduled concerning the status of each apparent outstanding discrepancy identified during commissioning. Discussion shall cover explanations of any disagreements and proposals for their resolution.
6. The CxA retains the original non-conformance forms until the end of the project.
7. Any required retesting by any subcontractor shall not be considered a justified reason for a claim of delay or for a time extension by the Contractor.

C. Failure Due to Manufacturer Defect. If 10%, or three, whichever is greater, of identical pieces (size alone does not constitute a difference) of equipment fail to perform to the Contract Documents (mechanically or substantively) due to manufacturing defect, not allowing it to meet its submitted performance spec, all identical units may be considered unacceptable by the Contractor or the OAR. In such case, the Contractor shall provide the Owner with the following:

1. Within one week of notification from the Contractor at Risk or the OAR, the subcontractor or manufacturer's representative shall examine all other identical units making a record of the findings. The findings shall be provided to the Contractor or the OAR within two weeks of the original notice.
2. Within two weeks of the original notification, the subcontractor or manufacturer shall provide a signed and dated, written explanation of the problem, cause of failures, etc. and all proposed solutions which shall include full equipment submittals. The proposed solutions shall not significantly exceed the specification requirements of the original installation.
3. The Contractor or the OAR will determine whether a replacement of all identical units or a repair is acceptable.
4. Two examples of the proposed solution will be installed by the subcontractor and the Contractor will be allowed to test the installations for up to one week, upon which the Contractor or the OAR will decide whether to accept the solution.
5. Upon acceptance, the subcontractor and/or manufacturer shall replace or repair all identical items, at their expense and extend the warranty accordingly, if the original equipment warranty had begun. The replacement/repair work shall proceed with reasonable speed beginning within one week from when parts can be obtained.

D. Approval. The CxA notes each satisfactorily demonstrated function on the test form. Formal approval of the Functional Performance Test is made later after review by the CxA and by the Contractor and the OAR. The CxA recommends acceptance of each test to the Contractor using a standard form. The Contractor gives final approval on each test using the same form, providing a signed copy to the CxA and the OAR.

3.7 DEFERRED TESTING

A. Unforeseen Deferred Tests. If any check or test cannot be completed due to the building structure, required occupancy condition or other deficiency, execution of checklists and functional testing may be delayed upon approval of the OAR. These tests will be conducted in the same manner as the seasonal tests as soon as possible. Services of necessary parties will be negotiated.

B. Seasonal Testing. During the warranty period, seasonal testing (tests delayed until weather conditions are closer to the system's design) shall be completed as part of this contract. The CxA shall coordinate this activity. Tests will be executed, documented and deficiencies corrected by the appropriate Subs, with Owner facilities staff and the CxA witnessing. Any final adjustments to the O&M manuals and as-builts due to the testing will be made by the Contractor.

3.8 TRAINING OF OWNER PERSONNEL

A. The Contractor shall be responsible for training coordination and scheduling and ultimately for ensuring that training is completed. Contractor shall ensure that certified factory manufactures representatives are present for training of Owners Personnel in the field and classroom setting.

B. The CxA shall be responsible for overseeing and approving the content and adequacy of the training of Owner personnel for commissioned equipment.

1. The CxA shall interview the Owners facility manager and lead Owners operations engineer to determine the special needs and areas where training will be most valuable. The Owner and CxA shall decide the training requirements for each piece of commissioned equipment. The CxA shall communicate the results to the Contractor & Subs and vendors who have training responsibilities.
2. In addition to these general requirements, the specific training requirements of the Owner's personnel by Subcontractors and vendors, is specified in Divisions 01, 21, 22, 23, 26, and 28.
3. Each Sub and vendor responsible for training will submit a written training plan to the Contractor, the CxA, and the OAR for review and approval prior to training. The plan will cover the following elements:

    a. Equipment (included in training)
    b. Intended audience
    c. Location of training
    d. Objectives
    e. Subjects covered (description, duration of discussion, special methods, etc.)
    f. Duration of training on each subject
    g. Instructor for each subject
    h. Methods (classroom lecture, video, site walk-through, actual operational demonstrations, written handouts, etc.)
    i. Instructor and qualifications

D. Approval. The CxA notes each satisfactorily demonstrated function on the test form. Formal approval of the Functional Performance Test is made later after review by the CxA and by the Contractor and the OAR. The CxA recommends acceptance of each test to the Contractor using a standard form. The Contractor gives final approval on each test using the same form, providing a signed copy to the CxA and the OAR.

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    e. Subjects covered (description, duration of discussion, special methods, etc.)
    f. Duration of training on each subject
    g. Instructor for each subject
    h. Methods (classroom lecture, video, site walk-through, actual operational demonstrations, written handouts, etc.)
    i. Instructor and qualifications

j. For the primary HVAC equipment, the Controls Contractor shall provide a discussion of the control of the equipment during the mechanical or electrical training conducted by others.

4. The CxA develops the overall training plan with assistance from the A/E, the Contractor and the Subcontractor(s) and coordinates and schedules, with the Contractor and the Subs for overall training of the commissioned systems. The CxA develops criteria for determining that the training was satisfactorily completed, including attending some of the training, etc. The CxA recommends approval of the training to the Contractor using a standard form. The Contractor also signs the approval form at one of the training sessions. Video recording of the training sessions will be provided by the subcontractors and or vendors with media cataloged and added to the O&M manuals by the Contractor.
5. At the Owner's option, at the first training session, the M/E/P/FP Engineers of record shall present the overall systems' design concept & intent and the design concept of each equipment section. This presentation shall be one to two hours in length and include a review of all systems using simplified system schematics (one-line drawings) including chilled water systems, condenser water systems, PCA systems, supply air systems, exhaust air system and outdoor air strategies.

3.9 OPERATION AND MAINTENANCE MANUALS

A. Standard O&M Manuals.

1. Contractor shall submit two draft copies of the complete operating and maintenance manual to the A/E and the CxA for review within 45 calendar days after approval of equipment shop drawings. One approved copy will be returned to the contractor within 30 days after receipt by the A/E.
2. Contractor shall submit corrected final approved O & M manuals prior to functional performance testing & training of Owners Personnel. Prior to final submittal, the CxA shall review the O&M manuals (in addition to the initial draft O&M manual), and documentation, with redline as-builts, for systems that were commissioned to verify compliance with the specifications. The CxA will communicate, through the Contractor, deficiencies in the manuals to the subcontractor. Upon a successful review of the corrections, the CxA will recommend approval and acceptance of these sections of the O&M manuals to the Contractor. The CxA will also review each piece of equipment warranty and verify that all requirements to keep the warranty valid are clearly stated. This work does not supersede the A/E's review of the O&M manuals according to the A/E's contract.
3. A/E Contribution. The A/E will include in the beginning of the O&M manuals a separate section describing the systems including:

a. The design intent narrative prepared by the A/E and provided as part of the bid documents, updated to as-built status by the A/E.
b. Simplified professionally drawn single line system diagrams on 8 ½" x 11" or 11" x 17" sheets. These shall include: the domestic hot water (DHW) system, the chilled water systems, condenser water systems, PCA systems, supply air distribution systems, exhaust air systems and electrical distribution system. These shall show major pieces of equipment such as chillers, cooling towers, pumps, VAV system, AHU, HX, and control valves, service valves, switchboards, motor control centers, panel boards, VFDs and ATS, etc.

4. The CxA shall review prior to substantial completion, the O&M manuals, documentation and redline as-builds for systems that were commissioned to verify compliance with the Specifications and Design intent. The CxA will communicate deficiencies in the manuals to the Contractor, the A/E, and the OAR. Upon a successful review of the corrections, the CxA recommends approval and acceptance of these sections of the O&M manuals to the Contractor, the OR, and the A/E. The CxA also reviews each piece of equipment warranty and verifies that all requirements to keep the warranty valid are clearly stated. This work does not supersede the A/E's review of the O&M manuals according to the A/E's contract.

B. Commissioning Record in O&M Manuals.

1. The Contractor and the CxA are responsible to coordinate and compile, organize and index the following O&M, Systems', and commissioning data by systems, both electronically and hard copy; in labeled, indexed and tabbed, three-ring binders and deliver it to the Owner. Two copies of the manuals will be provided. The format of the manuals shall be:

   Tab I-1 Commissioning Plan
   Tab I-2 Final Commissioning Report (see (B.2) below)

   Tab 01 System Type 1 (chilled water system, condenser water system, etc.)

   Sub-Tab A Design narrative and criteria, sequences, approvals for Equipment 1

   Sub-Tab B Startup plan and report, approvals, corrections, blank prefunctional checklists

   Colored Separator Sheets—for each equipment type (AHU, VAV, pumps, etc.)

   Sub-Tab C Functional tests (completed), trending and analysis, approvals and corrections, training plan, record and approvals, blank functional test forms and a recommended recommissioning schedule.

   Tab 02 System Type 2.....repeat as per System 1

2. Final Report Details. The final commissioning report shall include an executive summary, list of participants and roles, brief building description, overview of commissioning and testing scope and a general description of testing and verification methods. For each piece of commissioned equipment, the report should contain the disposition of the commissioning authority regarding the adequacy of the equipment, documentation and training meeting the contract documents in the following areas: 1) Equipment meeting the equipment specifications, 2) Equipment installation, 3) Functional performance and efficiency, 4) Equipment documentation and design intent, and 5) Operator training. All outstanding non-compliance items shall be specifically listed. Recommendations for improvement to equipment or operations, future actions, commissioning process changes, etc. shall also be listed. Each non-compliance issue shall be referenced to the specific functional test, inspection, trend log, etc. where the deficiency is documented. The functional performance and efficiency section for each piece of equipment shall include a brief description of the verification method used (manual testing, BAS trend logs, data loggers, etc.) and include observations and conclusions from the testing.
3. Other documentation will be retained by the CxA

4. The CxA shall review prior to substantial completion, the O&M manuals, documentation and redline as-builds for systems that were commissioned to verify compliance with the Specifications and Design intent. The CxA will communicate deficiencies in the manuals to the Contractor, the A/E, and the OAR. Upon a successful review of the corrections, the CxA recommends approval and acceptance of these sections of the O&M manuals to the Contractor, the OR, and the A/E. The CxA also reviews each piece of equipment warranty and verifies that all requirements to keep the warranty valid are clearly stated. This work does not supersede the A/E's review of the O&M manuals according to the A/E's contract.

B. Commissioning Record in O&M Manuals.

1. The Contractor and the CxA are responsible to coordinate and compile, organize and index the following O&M, Systems', and commissioning data by systems, both electronically and hard copy; in labeled, indexed and tabbed, three-ring binders and deliver it to the Owner. Two copies of the manuals will be provided. The format of the manuals shall be:

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2. Final Report Details. The final commissioning report shall include an executive summary, list of participants and roles, brief building description, overview of commissioning and testing scope and a general description of testing and verification methods. For each piece of commissioned equipment, the report should contain the disposition of the commissioning authority regarding the adequacy of the equipment, documentation and training meeting the contract documents in the following areas: 1) Equipment meeting the equipment specifications, 2) Equipment installation, 3) Functional performance and efficiency, 4) Equipment documentation and design intent, and 5) Operator training. All outstanding non-compliance items shall be specifically listed. Recommendations for improvement to equipment or operations, future actions, commissioning process changes, etc. shall also be listed. Each non-compliance issue shall be referenced to the specific functional test, inspection, trend log, etc. where the deficiency is documented. The functional performance and efficiency section for each piece of equipment shall include a brief description of the verification method used (manual testing, BAS trend logs, data loggers, etc.) and include observations and conclusions from the testing.
3. Other documentation will be retained by the CxA

3.10 WRITTEN WORK PRODUCTS

A. The commissioning process generates a number of written work products described in various parts of the Specifications. The Commissioning Plan—Construction Phase, lists all the formal written work products, describes briefly their contents, who is responsible to create them, their due dates, who receives and approves them and the location of the specification to create them. In summary, the written products are:

Product	Developed By
1. Develop and maintain a commissioning plan	CxA
2. Issue Cx Specifications	CxA
3. Commissioning milestones coordinated into the construction schedule.	CxA with Contractor
4. Equipment documentation submittals	Contractor & Subs
5. Sequence of Operation clarifications	Contractor, Subs and A/E as needed
5. Develop Verification checklists	CxA
6. Startup and initial checkout plan	Contractor, Subs and CxA
7. Startup and executed Verification checklist	Contractor, Subs with witness of CxA & OAR
8. Final TAB report	TAB
9. Develop Master Issues Log (deficiencies)	CxA
10. Commissioning Progress Record	CxA
11. Develop Functional Performance tests	CxA with Contractor & Subs, TAB contractor, A / E, and OAR
12. Execute the functional performance tests	Contractor & Subcontractors
13. Issue O&M manuals for approval / review	Contractor & Subcontractors
14. Issue approved O & M manuals	Contractor & Subcontractors
15. Current Facility Requirements and Operation and Maintenance Plan	CxA with Contractor, subcontractors, and Owner's O&M personnel
16. Overall training plan	Contractor & Subcontractors with Mfgr's. Factory Representatives
17. Execute specific training	Contractor & Subs
18. Systems manual	CxA with Contractor, subcontractors, and Owner's O&M personnel
19. Ongoing Commissioning Plan	CxA and Owner's Facility Management and O&M personnel
20. Final commissioning report	CxA

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SECTION 01 91 15 - FACILITY EXTERIOR ENCLOSURE COMMISSIONING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Conditions of Contract, including other Division 1 Specification Sections, apply to this Section.

B. Owner's Project Requirements (OPR) and the Basis of Design (BOD) documentation are included by reference for information only.

C. Division 01 Section 08 81 13.14 - Sustainable Design Requirements – LEED v4 BD+C for additional LEED v4 requirements related to commissioning.

D. ASHRAE standard 90.1 -2010, ASHRAE Guideline 0-2005 (The Commissioning Process), NIBS Guideline 3-2012 Building Enclosure Commissioning Process and ASHRAE Standard 202-2013 Commissioning Process for Buildings and Systems.

1.2 SUMMARY

A. This Section includes exterior enclosure commissioning procedures, including substructure, superstructure, exterior enclosure, and roofing construction that protects climate controlled interior space from unconditioned spaces and the exterior environment.

B. Commissioning

1. A systematic process ensuring that all building enclosure systems perform interactively according to the Designer's BOD and OPR. This is to be achieved through actual verification of systems performance during the construction period.
2. The commissioning process does not take away from, or reduce the responsibility of, the Contractor and installing subcontractors to provide a finished and fully functioning product.
3. Whole building commissioning includes both MEP commissioning authorities (CxA) and building enclosure commissioning authorities (BECxA). This specification only addresses building enclosure commissioning.

C. Building Envelope/Enclosure Commissioning Service Procurement: The Owner shall retain a commissioning agent, who will hire a consultant for the Project to provide building enclosure coordination and to oversee the commissioning of all building enclosure components.

D. Systems to be Commissioned: Sections of work to be commissioned include, but are not limited to, the sections of the building that include materials and assemblies that are responsible for creating environmental separation. All performance values shall be as described within each individual section.

E. Description: The following describes the steps involved in building enclosure commissioning and the services provided by the Building Envelope Commissioning Authority (BECxA):

1. Pre-Design/Design Phase: The steps included in this phase include the following:

a. Attend initial Team Meeting.
b. Evaluate design concepts against OPR and Architect's BOD.
c. Incorporate commissioning requirements into the Construction Documents via commissioning specification.
d. Construction Documents review prior to Bid Set.
e. Back check Construction Documents review.

2. Preconstruction Phase: The steps included in this phase include the following:

a. Develop functional Test Plan for exterior enclosure.
b. Review of pertinent Shop Drawings/Submittals.
c. Observe construction and testing mockup(s).
d. Develop/define the exterior enclosure Commissioning Plan.
e. Attend preconstruction conferences.

3. Construction Phase: The steps included in this phase include the following:

a. Finalize Commissioning Plan.
b. Attend pertinent Preconstruction and Progress Meetings (as needed).
c. Review mockups and witness all mockup testing.
d. Field observations of exterior enclosure installations.
e. Observe testing and performance of functional tests.

4. Operations and Maintenance (O&M) Phase: The steps included in this phase include the following:

a. Finalization of Project commissioning record with Warranties and Closeout Documentation.
b. Verify applicable training procedures of building maintenance personnel.

F. Owner's Project Requirements (OPR) and the Basis of Design (BOD) documentation are included by reference for information only.

G. Division 01 Section 08 81 13.14 - Sustainable Design Requirements – LEED v4 BD+C for additional LEED v4 requirements related to commissioning.

H. ASHRAE standard 90.1 -2010, ASHRAE Guideline 0-2005 (The Commissioning Process), NIBS Guideline 3-2012 Building Enclosure Commissioning Process and ASHRAE Standard 202-2013 Commissioning Process for Buildings and Systems.

1.3 COMMISSIONING TEAM MEMBERS

A. Commissioning Team

1. Owner (PM) and his/her Consultants.
2. Contractor.
3. Designer and Design Engineers (particularly the Architect and Engineers – A/E).
4. Commissioning Authority (CxA).
5. Building Envelope/Enclosure Commissioning Authority (BECxA)
6. Specialty Subcontractors.

a. Attend initial Team Meeting.
b. Evaluate design concepts against OPR and Architect's BOD.
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4. Commissioning Authority (CxA).
5. Building Envelope/Enclosure Commissioning Authority (BECxA)
6. Specialty Subcontractors.

1.4 CONTRACTOR'S RESPONSIBILITIES

A. Provide Coordination Drawings (see 1.7 Building Enclosure Coordination Drawings) showing the complete coordination and integration of all work of commissioned envelope systems to the Commissioning Authority. The Contractor shall be responsible for coordinating all aspects of intersecting building envelope trades/systems and develop the coordination drawings and review the coordination drawings with the Architect as required. The Contractor shall also review the proposed coordination drawings with the BECxA.

B. Provide cut sheets and Shop Drawings Submittals of commissioned systems to the Commissioning Authority. The Contractor shall be responsible for reviewing the Shop Drawings for accuracy and to identify conflicts requiring resolution prior to submitting to the Architect. This shall include coordinating all aspects of intersecting building envelope trades/systems and providing graphic documentation of mockup details as required to ensure accurate revisions of shop drawings are implemented.

C. Conduct Preconstruction, Design, and Construction Phase building enclosure coordination meetings. Coordinate preconstruction meetings as required to ensure attendees include the installing subcontractor, installing subcontractors whose work interfaces with the systems being discussed, applicable manufacturers, BECxA, the Architect and the OAR unless other specified.

D. Provide Test Data, Letters of Compatibility, and Certificates to the Commissioning Agent.

E. Coordinate trades in accordance with the requirements in the General Conditions and General Requirements of the Construction Contract.

F. Permit and provide access to locations of installed systems, subsystems, and components for testing and inspection.

G. Review test procedures to ensure feasibility, safety and equipment protection and provide necessary written limits to be used during tests.

H. Provide schedule and accommodate field quality control tests and inspections required by the Contract Documents and product manufacturers to the Commissioning Authority.

1. Upgrade schedule biweekly throughout the construction period.

I. Completing verification checklists and responding to issues identified by the BECxA. Note: For this project, the BECxA will be utilizing a cloud-based Cx web application for managing the commissioning documentation associated with the project. Refer to Section 01 91 13.

J. Provide field quality control testing and conduct systematic field quality control inspections on all exterior enclosure construction and submit reports to the BECxA and project's Commissioning Authority through the cloud-based Cx web site. Provide weekly updates of checklists provided by the BECxA for applicable building envelope systems and related components.

K. Participate in testing/inspection procedures meetings.

L. Direct appropriate subcontractors to correct deficiencies as interpreted by the Commissioning Agent., Designer, and Owner. Field verify deficiencies have been corrected and provide written documentation and corresponding photographs of same through the cloud-based Cx web site.

M. During construction, maintain as-built redline drawings for all drawings.

N. Coordinate with manufacturers to determine specific requirements to maintain the validity of the warranty. This should include coordinating all required manufacturer's participation including any required preconstruction/progress meetings, site visits/inspections (including all required 3rd party inspections) and field testing. Additionally, this should include confirming the manufacturer's approval of all installing contractors (subcontractors) prior to bidding.

O. Provide input and required documentation for LEED v4 certification of envelope Cx activities, including, but not limited to, Current Facility Requirements, O&M Plan, Ongoing Commissioning Plan, and Final Commissioning Report to the BECxA and the project's Commissioning Authority.

P. Submit operation, maintenance and warranty data for systems, subsystems, and components to the Commissioning Authority.

Q. Participate in maintenance orientation, training, and inspection.

1.5 DESIGNER'S RESPONSIBILITIES

A. Provide paper and electronic copies of Project Drawings and Specifications to the BECxA.

B. Provide paper and electronic copies of submittals and shop drawings approved for construction to the BECxA.

C. Provide written responses to design review comments from the BECxA, the Commissioning Authority or other parties as requested.

D. Attend Design, Preconstruction, and Construction Phase coordination meetings.

E. Design mock-up wall, incorporating required components and details as required for integrating project specific conditions for visual evaluation and testing; after discussions with the BECxA and the CxA.

F. Participate in testing/inspection procedures meetings.

G. Provide resolution for items for which the BECxA, the Commissioning Authority and Contractor may be in disagreement.

1.6 BUILDING ENCLOSURE COMMISSIONING AUTHORITY RESPONSIBILITIES

A. The BECxA will begin work in the Pre-Design or Design Phases and continue until all building enclosure systems have been accepted by both the Designer and the Owner. The specific tasks/responsibilities of the BECxA include the following:

1. Incorporate commissioning requirements into the Construction Documents via a commissioning specification.
2. Initial review of preliminary Construction Documents against OPR and BOD.
3. Perform back check review of Construction Documents against OPR and BOD.
4. Develop functional Test Plan for exterior enclosure.

M. During construction, maintain as-built redline drawings for all drawings.

N. Coordinate with manufacturers to determine specific requirements to maintain the validity of the warranty. This should include coordinating all required manufacturer's participation including any required preconstruction/progress meetings, site visits/inspections (including all required 3rd party inspections) and field testing. Additionally, this should include confirming the manufacturer's approval of all installing contractors (subcontractors) prior to bidding.

O. Provide input and required documentation for LEED v4 certification of envelope Cx activities, including, but not limited to, Current Facility Requirements, O&M Plan, Ongoing Commissioning Plan, and Final Commissioning Report to the BECxA and the project's Commissioning Authority.

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2. Initial review of preliminary Construction Documents against OPR and BOD.
3. Perform back check review of Construction Documents against OPR and BOD.
4. Develop functional Test Plan for exterior enclosure.

5. Develop inspection checklists for applicable building envelope systems and related components which shall be provided to the Contractor for distribution to subcontractors.
6. Review of Project Drawings and Specifications at 60%, and 95% completion for constructability, durability, and performance of exterior enclosure conformance.
7. Review of pertinent building enclosure Shop Drawings/Submittals and Coordination Drawings for compliance with Contract Documents.
8. Review spray racks, testing equipment and test protocols for specified field testing outlined in Section 01 45 00.
9. Observe the construction of mockups and observe testing of same.
10. Document construction of commissioned components at the completion of mockup testing. This documentation will consist of photographs documentation provided by the BECxA and graphic representation of mockup details developed by the Contractor for use in revising shop drawings as needed.
11. Attend pertinent Progress Meetings (as needed).
12. Perform field observations of exterior enclosure installations.
13. Maintain a log of deficient conditions.
14. Direct contractor(s) and witness functional or manual field performance (in-situ) testing.
15. Evaluate substitution requests for compliance with Contract Documents and for compatibility with work of other subcontractors.
16. Compile test data, inspection reports, and certificates through the cloud-based Cx web application and include them in the final LEED documentation and Commissioning Record.
17. Work in conjunction with the Contractor, the subcontractors and the Architect to resolve conflicts in the installation of materials and assemblies specific to the building enclosure trades.
18. Finalize Commissioning Record with warranties and closeout documentation.
19. Verify applicable training procedures of building maintenance personnel.

1.7 BUILDING ENCLOSURE COORDINATION DOCUMENTS

A. The Contractor shall be fully responsible for coordinating all trades, assuring proper construction sequences and schedules, and coordinating the actual installed location and interface of all work that impacts the building enclosure. Before materials are fabricated or the work begun, the Contractor shall supervise and direct the creation of one complete set of Coordination Drawings showing the complete coordination and integration of all work of this Project relating to the thermal, drainage, air barrier, vapor barrier, expansion joints and structural systems of enclosure. Coordination Drawings are intended to assist the Contractor during construction, and may be produced using Architect's drawings, shop drawings, or other drawings as needed to communicate coordination requirements to all concerned subcontractors.

B. Specifically, Coordination Drawings shall include, but are not limited to the following detail conditions and system connections:

1. Low-slope roofing terminations at perimeter walls and cladding.
2. Steep-slope roofing to low-slope roofing transitions.
3. Steep-slope roofing terminations at perimeter walls and cladding.
4. Roof drainage systems including but not limited to provision for thermal expansion and contraction and related requirements regarding coordination of drain outlet(s) locations, emergency overflow drainage, etc.
5. Metal coping and flashing terminations for all wall cladding systems.
6. Roof-to-wall conditions for all wall cladding above roof.
7. Masonry and/or concrete panel tie-in to adjacent cladding and backup membranes.
8. Curtain-Wall frame tie-ins to surrounding and adjacent waterproofing/air barrier membranes.

9. Thru-wall flashing tie-ins to adjacent waterproofing/air barrier membranes.
10. Cladding type transitions (same plane and corners)
11. Skylight systems and adjacent construction.
12. Cladding transition flashing and closure metal as required at wall fenestrations and intersections between different building envelope systems.
13. Expansion joints throughout all buildings at intersections between different wall systems, roof systems, curtain walls, skylights, parking decks, etc., at all vertical and horizontal conditions.
14. Structural expansion joint cavities/openings and architectural expansion joint cavities/openings.
15. Canopy tie-in flashing at adjacent walls or cladding above.
16. Below grade waterproofing systems along finished grade (landscape or hardscape) terminations, below grade vapor barrier transitions and adjacent wall cladding systems.
17. All other major transition points between trades.

C. Mockup Shop Drawings: Provide shop drawings for construction of windows, curtain-walls, wall claddings and related transition flashing, closure metal, expansion joints, sealant joints, etc., for mockups. Field revisions to mockups due to testing failure or other causes shall be documented in revised shop drawings to be identified as "Post Mockup Revision". The Contractor shall record changes to mockup details and review same with the BECxA and the Architect for accuracy and concurrence

D. In regard to coordination of building envelope systems and components, coordination of work and multiple trades shall include the following:

1. Building Enclosure Subcontractors: The Contractor shall circulate the Coordination Drawings to other subcontractors and trades whose work might conflict with other work and require these subcontractors to accurately and neatly show the actual size and location of all their work. These subcontractors shall note any apparent conflicts, suggest alternate solutions, and return the Coordination Drawings to the Contractor.
2. After each trade completes its drawings, a meeting will be held to resolve conflicts between the trades and establish sequencing.

    a. Trades Coordination Drawings shall be submitted to the Contractor for Designer's review prior to starting any installations.
    b. Coordination issues or requests for variance shall be called to the Contractor's attention for the Designer's resolution.
    c. The Coordination Drawings, including all Designer's resolutions, shall be reviewed with the BECxA before work in the field is begun.
    d. Contractor Review and Submission: The Contractor shall carefully review, modify, and approve Coordination Drawings in cooperation with the subcontractors to assure that conflicts, if any, are resolved before work in the field is begun.

1.8 FUNCTIONAL AND MANUAL PERFORMANCE TESTING (IN-SITU)

A. Objectives and Scope: The objective of functional performance testing is to demonstrate that each building enclosure/assembly system is operating according to the documented design intent of the Contract Documents and in accordance with the OPR. Functional testing facilitates bringing the material assembly from a state of substantial completion to full operation. Additionally, during the testing process, areas of non-compliant performance are identified and corrected, improving the operation and functioning of the building enclosure/assemblies.

9. Thru-wall flashing tie-ins to adjacent waterproofing/air barrier membranes.
10. Cladding type transitions (same plane and corners)
11. Skylight systems and adjacent construction.
12. Cladding transition flashing and closure metal as required at wall fenestrations and intersections between different building envelope systems.
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    c. The Coordination Drawings, including all Designer's resolutions, shall be reviewed with the BECxA before work in the field is begun.
    d. Contractor Review and Submission: The Contractor shall carefully review, modify, and approve Coordination Drawings in cooperation with the subcontractors to assure that conflicts, if any, are resolved before work in the field is begun.

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A. Objectives and Scope: The objective of functional performance testing is to demonstrate that each building enclosure/assembly system is operating according to the documented design intent of the Contract Documents and in accordance with the OPR. Functional testing facilitates bringing the material assembly from a state of substantial completion to full operation. Additionally, during the testing process, areas of non-compliant performance are identified and corrected, improving the operation and functioning of the building enclosure/assemblies.

B. Development of Test Procedures: Before test procedures are written, the BECxA shall obtain all requested documentation and a current list of change orders affecting building enclosure/assemblies. The BECxA shall develop specific test procedures for each building enclosure/assembly. Prior to execution, the BECxA shall provide a copy of the test procedures to the subcontractor(s) who will review the tests for feasibility, building enclosure/assemblies warranty protection.

1. The BECxA shall direct and witness Owner-contracted performance testing.
2. The Contractor shall construct or arrange for construction of test chambers, and shall provide staging and access equipment as needed to position spray racks at the exterior. The Contractor shall be responsible for locating and providing all water and electrical sources to perform testing.
3. All testing shall be conducted by a qualified independent test agency with at least 5 years of documented experience in performing the specified testing.
4. The purpose of any given specific test is to verify and document compliance with the stated criteria of the Construction Documents.

C. Test Methods

1. Functional and manual performance testing and verification will typically follow ASTM industry standards. The BECxA will determine which method is most appropriate for tests and modify test methods when an existing industry method is not available or applicable.
2. Simulated Conditions: Simulating conditions may be allowed at the direction of the BECxA, though testing actual conditions is encouraged wherever practical.

D. Coordination and Scheduling: The Contractor and their subcontractors shall provide sufficient notice to the Commissioning Authority regarding their completion schedule for the functional checklists and construction of the assemblies or building enclosure systems. The BECxA will schedule functional tests through the Contractor and affected subcontractors. The Contractor under the direction of the BECxA shall perform all functional testing of all building enclosure assemblies or building enclosure systems.

E. In general, functional testing is conducted after mockup testing has been satisfactorily completed.

F. Problem Solving: The BECxA may recommend solutions to problems found, however, the burden of responsibility to solve, correct, and retest problems is with the contractor responsible for the installation of the tested assembly.

G. Failed tests will result in additional testing of the failed specimen in addition to conducting at least 1 additional test on a different test specimen at the location selected and mutually agreed upon between the Architect and the BECxA. In the event another failure occurs during the additional testing, 2 more test specimens will be selected for additional testing and the process will be repeated until passing results are achieved. In addition, the installing contractor and Contractor shall be responsible for field verifying that similar anomalies, to those that resulted in failure, do not exist elsewhere throughout all similar project wide units. The cost of re-staging and constructing test chamber shall be responsibility of the deficient contractor. The cost for the BECxA to conduct or observe one (1) retest of the failed specimen will be borne by the Owner. Costs for subsequent retests due to failure shall be the responsibility of the deficient contractor Test will be concluded only when satisfactory results are achieved.

H. Testing reports shall be provided by the independent test agency within five (5) working days of each test. All test reports shall be distributed to the Contractor, OAR, CxA, BECxA, Architect and applicable subcontractor. All test reports shall be uploaded through the cloud-based Cx web site.

I. Non-Conformance:

1. The independent test agency and the BECxA will record the results of the functional tests in a written report. All deficiencies or non-conformance issues shall be noted and reported.
2. Corrections of minor deficiencies identified may be made during the tests at the discretion of the BECxA. In such cases, the deficiency and resolution will be documented in the written report.
3. Every effort will be made to expedite the testing process and minimize unnecessary delays, while not compromising the integrity of the procedures.
4. As tests progress and a deficiency is identified, the BECxA discusses the issue with the Contractor and executing Contractor.

    a. When there is no dispute on the deficiency and the subcontractor accepts responsibility to correct it:

        1) The BECxA documents the deficiency and the subcontractor's response and intentions and work proceeds.
        2) The Contractor and BECxA will coordinate the rescheduled test with the affected Contractor, and the test is repeated.

    b. If there is a dispute about a deficiency regarding whether it is a deficiency or who is responsible:

        1) The deficiency shall be documented on the Non-Compliance Form with the subcontractor's response and copy given to the Contractor and to the subcontractor's representative assumed to be responsible.
        2) Resolutions are made at the lowest management level possible. Other parties are brought into the discussions as needed. Interpretive authority is with the A/E. Final acceptance authority is with the Owner's PM.
        3) The BECxA documents the resolution process.
        4) Once the interpretation and resolution have been decided, the appropriate party corrects the deficiency, signs the Statement of Correction on the Non-Compliance form, and provides it to the Contractor and the BECxA. The Contractor and the BECxA will reschedule the test with the affected Contractors on a mutually agreed upon date, and the test(s) are repeated until satisfactory performance is achieved.
        5) Any required retesting that is a result of deficient installation shall not be considered a justified reason for a claim of delay or for a time extension by the Contractor.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 COMMISSIONED SYSTEMS

H. Testing reports shall be provided by the independent test agency within five (5) working days of each test. All test reports shall be distributed to the Contractor, OAR, CxA, BECxA, Architect and applicable subcontractor. All test reports shall be uploaded through the cloud-based Cx web site.

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 COMMISSIONED SYSTEMS

A. The BECxA shall develop and coordinate a systematic process to verify the building envelope/enclosure systems have been constructed according to the requirements of the OPR and BOD.

B. Building envelope/enclosure commissioning shall be accomplished via the responsibilities outlined previously and may include a combination of submittal reviews, mockup inspection/testing, field observations, material sampling/testing, verification checklists completed by the installing contractor, functional performance testing, closeout documentation review, etc. Extent of Building Envelope/Enclosure Commissioning shall be determined during a Commissioning scoping meeting prior to construction.

C. Building envelope/enclosure systems and associated components to be commissioned may include, but are not limited to:

1. Section 03 30 00 - Cast In Place Concrete

    a. Inspections or test observations may include:

        1) Inspect associated waterstops and vapor barriers.
        2) Monitor concrete placement and inspect finishes/surfaces scheduled to receive roofing, waterproofing, expansion joints, membranes, air barriers, sealants, sealers, paints, coatings, etc.
        3) Inspect penetration detailing, laps, membrane repairs, etc. at vapor barrier installations.
        4) ASTM F 1869 – Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.

2. Section 03 45 00 - Architectural Precast Concrete

    a. Inspections or test observations may include:

        1) Inspect concrete finishes/surfaces scheduled to receive roofing, waterproofing, expansion joints, membranes, air barriers, sealants, sealers, paints, coatings, etc.
        2) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems. AAMA 501.2 testing may also be performed at other building envelope locations as deemed necessary and as directed by the BECxA for purposes of evaluating water penetration resistance of various exterior cladding systems or as a diagnostic tool to isolate and identify areas of suspected water leakage.

3. Section 03 47 13 – Tilt-Up Concrete

    a. Inspections or test observations may include:

        1) Inspect concrete finishes/surfaces scheduled to receive roofing, waterproofing, expansion joints, membranes, air barriers, sealants, sealers, paints, coatings, etc.
        2) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

4. Section 06 10 00 – Rough Carpentry

a. Inspections or test observations may include:

1) Forest Stewardship Council (FSC) - FSC Principles and Criteria for Forest Stewardship

5. Section 06 16 00 – Sheathing

a. Inspections or test observations may include:

1) Inspect fastening requirements, sheathing joint treatment and all surfaces scheduled to receive roofing, membranes, air barriers, etc.

6. Section 07 13 26 – Self Adhering Sheet Waterproofing

a. Inspections or test observations may include:

1) Inspect substrates to receive waterproofing membrane and associated insulation, protection board, drainage panels counter flashing, etc.
2) Flood testing or modified AAMA 501.2 hose testing.
3) Monitor concrete placement, U.V. exposure limitations, back filling techniques, repairs, etc.

7. Section 07 18 00/01 – Traffic Coatings

a. Inspections or test observations may include:

1) Substrates to receive traffic coatings.
2) Wet/dry film mil thickness sampling.
3) Evaluation/sampling of related sealants.

8. Section 07 19 00 – Water Repellents

a. Inspections or test observations may include:

1) Substrates to receive water repellents.
2) Verify with manufacturer application/coverage rates including required mockup assemblies prior to widespread installation,
3) Evaluation/sampling of water repellents mockups/installation.

9. Section 07 21 00 – Thermal Insulation

a. Inspections or test observations may include:

1) Visual observations.
2) Infrared survey of roofing assemblies.
3) ASTM C1060 – Standard Practice for Thermographic Inspection of Insulation Installations in Envelope Cavities of Frame Buildings.

10. Section 07 21 19 – Foamed-In-Place Insulation

a. Inspections or test observations may include:

a. Inspections or test observations may include:

1) Forest Stewardship Council (FSC) - FSC Principles and Criteria for Forest Stewardship

5. Section 06 16 00 – Sheathing

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10. Section 07 21 19 – Foamed-In-Place Insulation

a. Inspections or test observations may include:

1) Visual observations.
2) ASTM C1060 – Standard Practice for Thermographic Inspection of Insulation Installations in Envelope Cavities of Frame Buildings.

11. Section 07 27 29 – Air-Barrier Coatings

a. Inspections or test observations may include:

1) Substrates to receive air-barrier coatings.
2) Wet/dry film mil thickness sampling.
3) Inspect penetration detailing, laps, membrane repairs, etc.
4) Evaluation/sampling of related sealants.

12. Section 07 41 10 - Metal Canopy Cladding System"

a. Inspections or test observations may include:

1) Inspect associated weather barrier membrane, insulation, flashing, sealants, etc.
2) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.
3) Flood testing roof gutters to the highest water level possible (at overflow capacity) for a minimum 2 hours duration.

13. Section 07 42 13.23 – Metal Composite Material Wall Panels

a. Inspections or test observations may include:

1) Inspect associated weather barrier membrane, insulation, flashing, sealants, etc.
2) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

14. Section 07 52 00 – SBS Modified Bituminous Membrane Roofing

a. Inspections or test observations may include:

1) Inspection of associated insulation, flashing, sealants, etc.
2) Flood testing of drain assemblies, if required.
3) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.
4) Roof uplift testing – FMG 1-52, Florida Building Code TAS 124, etc., if required.

15. Section 07 62 00 – Sheet Metal Flashing and Trim

a. Inspections or test observations may include:

1) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

16. Section 07 71 29 Manufactured Roof Expansion Joints

a. Inspections or test observations may include:

1) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

17. Section 07 72 00 – Roof Accessories

    a. Inspections or test observations may include:

        1) Inspection of associated insulation, flashing, sealants, etc.

18. Section 07 92 00/01 – Joint Sealants

    a. Inspections or test observations may include:

        1) ASTM C 1521 – Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints.

19. Section 07 95 01 – Expansion Control

    a. Inspections or test observations may include:

        1) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

20. Section 07 95 13.16 – Exterior Expansion Joint Cover Assemblies

    a. Inspections or test observations may include:

        1) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

21. Section 08 11 13 – Hollow Metal Doors and Frames

    a. Inspections or test observations may include:

        1) Inspection of weatherproof gaskets, door sweeps, etc., intended to provide weather tightness.

22. Section 08 33 23 – Overhead Coiling Doors (If applicable)

    a. Inspections or test observations may include:

        1) Inspection of weatherproof gaskets, door sweeps, etc., intended to provide weather tightness.

23. Section 08 41 13 – Aluminum-Framed Entrances and Storefronts

    a. Inspections or test observations may include:

        1) ASTM E 783 – Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors.

1) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

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a. Inspections or test observations may include:

1) Inspection of associated insulation, flashing, sealants, etc.

18. Section 07 92 00/01 – Joint Sealants

a. Inspections or test observations may include:

1) ASTM C 1521 – Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints.

19. Section 07 95 01 – Expansion Control

a. Inspections or test observations may include:

1) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

20. Section 07 95 13.16 – Exterior Expansion Joint Cover Assemblies

a. Inspections or test observations may include:

1) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

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a. Inspections or test observations may include:

1) Inspection of weatherproof gaskets, door sweeps, etc., intended to provide weather tightness.

22. Section 08 33 23 – Overhead Coiling Doors (If applicable)

a. Inspections or test observations may include:

1) Inspection of weatherproof gaskets, door sweeps, etc., intended to provide weather tightness.

23. Section 08 41 13 – Aluminum-Framed Entrances and Storefronts

a. Inspections or test observations may include:

1) ASTM E 783 – Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors.

2) ASTM E 1105 – Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Wall, by Uniform or Cyclic Static Air Pressure Difference.
3) AAMA 501.2 – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

24. Section 08 42 29.23 – Sliding Automatic Entrances

a. Inspections or test observations may include:

1) Inspection of weatherproof gaskets, door sweeps, etc., intended to provide weather tightness.

25. Section 08 44 13 – Glazed Curtain Walls and Skylights

a. Inspections or test observations may include:

1) ASTM E 783 – Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors.
2) ASTM E 1105 – Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Wall, by Uniform or Cyclic Static Air Pressure Difference.
3) AAMA 501.2 – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

26. Section 08 80 00 – Glazing

a. Inspections or test observations may include:

1) Inspection of associated insulation, flashing, sealants, etc.

27. Section 08 91 19 – Fixed Louvers

a. Inspections or test observations may include:

1) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

28. Section 09 24 00 – Portland Cement Plastering

a. Inspections or test observations may include:

1) AAMA 501.2 (modified) – Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems.

29. Section 09 91 13 – Exterior Painting

a. Inspections or test observations may include:

1) Wet/dry film mil thickness sampling.
2) ASTM D 3359 – Standard test Methods for Measuring Adhesion by Tape Test.

30. Section 09 96 00 – High Performance Coatings

    a. Inspections or test observations may include:

        1) Wet/dry film mil thickness sampling.
        2) ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.

3.2 SAMPLE SCHEDULE OF TESTS

A. Window Mockup: Two (2) air infiltration tests and two (2) water infiltration tests of each window mockup type and surrounding components and systems. Infiltration tests to be performed by constructing a wood framed chamber with 10-mil clear polyethylene at the interior side and introducing negative pressure (suction) in the chamber during spray rack water test at the exterior side. Test Criteria: Air infiltration – ASTM E783-02; Water Infiltration – ASTM E1105-00. Contractor shall construct or arrange construction of the test chamber and associated spray rack per the size and specifications as provided by the Architect and as reviewed by the BECxA. Contractor shall also provide or arrange staging and access equipment for positioning of spray rack and provide water and electrical sources. All testing shall be performed with pressures equal to laboratory test pressures without reduction

B. Window In-Situ Tests (Functional Performance Testing): Air and water infiltration tests shall be performed on a minimum of 5% of all storefront windows and 5% of glazed curtain walls throughout the project, prior to adjacent interior finish installation including wall insulation. Test protocols to match those on window mockup. Contractor shall construct or arrange construction of the test chamber and associated spray rack per the size and specifications as provided by the Architect and as reviewed by the BECxA. Contractor shall also provide or arrange staging and access equipment for positioning of spray rack and provide water and electrical sources. All testing shall be performed with test pressures equal to laboratory test pressures without reduction.

C. Skylight In-Situ Tests (Functional Performance Testing): Air and water infiltration testing shall be performed on a minimum of 5% of all skylight types prior to adjacent interior finish installation including wall insulation. Test protocol to match those on the skylight mockup (if applicable). Contractor shall construct or arrange construction of the test chamber and associated spray rack per the size and specifications as provided by the Architect and as reviewed by the BECxA. Contractor shall also provide or arrange staging and access equipment for positioning of spray rack and provide water and electrical sources. All testing shall be performed with test pressures equal to laboratory test pressures without reduction.

END OF SECTION 01 91 15

30. Section 09 96 00 – High Performance Coatings

    a. Inspections or test observations may include:

        1) Wet/dry film mil thickness sampling.
        2) ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.

3.2 SAMPLE SCHEDULE OF TESTS

A. Window Mockup: Two (2) air infiltration tests and two (2) water infiltration tests of each window mockup type and surrounding components and systems. Infiltration tests to be performed by constructing a wood framed chamber with 10-mil clear polyethylene at the interior side and introducing negative pressure (suction) in the chamber during spray rack water test at the exterior side. Test Criteria: Air infiltration – ASTM E783-02; Water Infiltration – ASTM E1105-00. Contractor shall construct or arrange construction of the test chamber and associated spray rack per the size and specifications as provided by the Architect and as reviewed by the BECxA. Contractor shall also provide or arrange staging and access equipment for positioning of spray rack and provide water and electrical sources. All testing shall be performed with pressures equal to laboratory test pressures without reduction

B. Window In-Situ Tests (Functional Performance Testing): Air and water infiltration tests shall be performed on a minimum of 5% of all storefront windows and 5% of glazed curtain walls throughout the project, prior to adjacent interior finish installation including wall insulation. Test protocols to match those on window mockup. Contractor shall construct or arrange construction of the test chamber and associated spray rack per the size and specifications as provided by the Architect and as reviewed by the BECxA. Contractor shall also provide or arrange staging and access equipment for positioning of spray rack and provide water and electrical sources. All testing shall be performed with test pressures equal to laboratory test pressures without reduction.

C. Skylight In-Situ Tests (Functional Performance Testing): Air and water infiltration testing shall be performed on a minimum of 5% of all skylight types prior to adjacent interior finish installation including wall insulation. Test protocol to match those on the skylight mockup (if applicable). Contractor shall construct or arrange construction of the test chamber and associated spray rack per the size and specifications as provided by the Architect and as reviewed by the BECxA. Contractor shall also provide or arrange staging and access equipment for positioning of spray rack and provide water and electrical sources. All testing shall be performed with test pressures equal to laboratory test pressures without reduction.

END OF SECTION 01 91 15